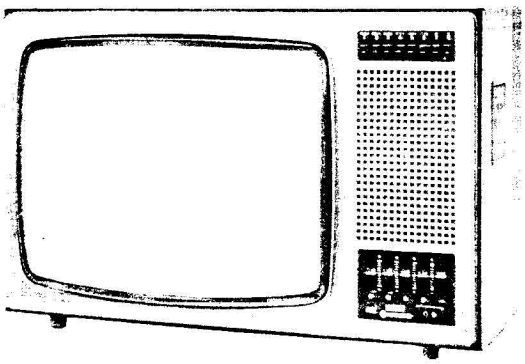
HITACHI

NP6C/NP6C-2 Chassis
Models CRP-143, CTP-203
CTP-213, CWP-132

CAUTION:
Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this Service Manual.



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TECHNICAL SPECIFICATIONS

TV standard	625-line single standard
Channel coverage	UHF channels 21-68
Aerial input impedance	75-ohm unbalanced
Intermediate frequencies	
I.F. luminance	39.50 MHz
I.F. Sound	33.50 MHz
I.F. Chrominance	35.07 MHz
F.M. Sound	6.00 MHz
Colour subcarrier	4.43 MHz
Convergence	Self-convergence
Focusing	Electro-static
Mains voltage	240V ~ 50Hz
Fuses	
Mains input	2A/T x 1
Regulate line	800mA/T x 1
	630mA/T x 1
Picture tube	20", 510HWB22
Programme Selectors	Push button selector
IC's	3
Transistors	46
Diodes	57
Speaker	10 x 15cm
Sound output	3W at 400Hz
Power consumption	75W
Dimensions	
W	65.4cm
H	43.0cm
D	45.6cm
Weight	appr. 25kg

SOLID STATE COLOUR TELEVISION

March 1977

SAFETY PRECAUTIONS

WARNING : Since the chassis of this receiver is connected to one side of the Mains Supply during operation, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of equipment. The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picutre tube away from the body while handling.
2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.
3. When repalcing a chassis in the cabient, always repalce all the protective devices are put back in palce, such as; barriers, non-metallic knobs, adjustment and compartment cover or shields, isolation resistor-capacitor, etc.
4. When service is required, observe the origianl lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacturer's repalcement component. Especially critical components as indicated on the circuit diagram should not be repalced by other makes.
   Furthermore where a short circuit has occurred, repalce those components that indicate evidence of overheating.
6. Before returning a serviced receiver to the customer, the service technician must throughtly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the instrument by the manufacturer has become defective, or inadvertenly defeated during servicing.
   Therefore, the following checks are recommended for the continued protection of the customers and service technicians.

INSULATION

Insulation resistance should not be less than 7MΩ at 500V DC between the mains poles and any accessible metal parts.

Also, No flashover or breakdown should occur during the dielectric strength test, to apply 4KV AC for one minute between the mains poles and any accessible metal parts.

HIGH VOLTAGE

High voltage should always be kept at rated value of the chassis,-no-higher. Operating at higher voltage may cause a failure of the picture tube or high voltage supply and, also, under certain circumstances could produce X-radiation moderately in excess of design levels. The high voltage must not, under any circumstances, exceed 25KV on the chassis.

X-RADIATION

TUBES: The primary source of X radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X radiation emissions.

For continued X radiation protection, the replacement tube must be the same type as the original, HITACHI approved type.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receiver have special safetyrelated characteristics. These charactristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such heatures are identified by marking with a ⚠ on the schematics and on the parts the aprts list in this Service Manual.

The use of a substitute repalcement component which does not have the same safety characteirstics as the HITACHI recommended repalcement one, shown in the aprts list in this Service Manural, may create shock, fire, X radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of, HITACHI Service Manual may be obtained at a nominal charge from your HITACHI SALES CORPORATION.

CONFIGURATION OF CHASSIS

NP6C chassis consists of two principle circuit units, i.e. the signal unit and the power supply & defelction unit. The construction of this television receiver is described on a chart as below.

A major part of the units and boards are conencted through plug-in system and no solder iron is needed on disassembling.

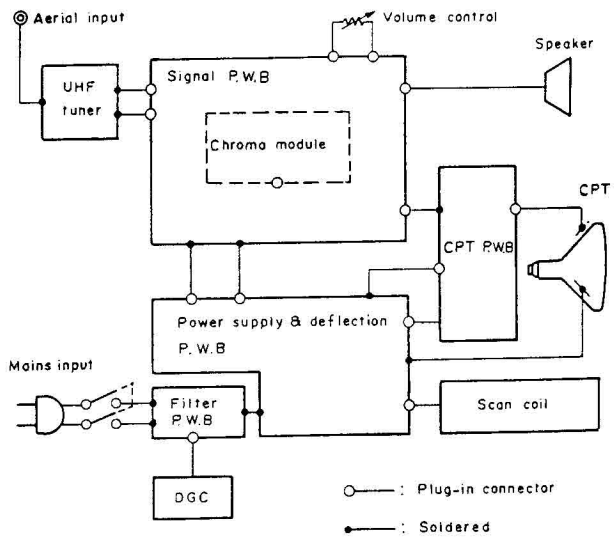


Fig. 1

TECHNICAL PRECAUTIONS

1. Power supply circuit (HTI stabilizing circuit)

a) Circuit function

Power supply circuit incorporated in NP6C chassis is a switching mode stabilized power supply, and its block diagram is shown in Fig. 2.

Mains input is recetified and this unstabilized DC voltage is switched by the line frequency synchronized switching signal.

The duration of the switched square wave is altered and this switched square wave is rectified, hence stabilized HT1 output is obtained.

When switching on the receiver, the switching signal is derived from the oscillator and after starting on, the shaped pulse form the line output stage is fed to the pulse width modulator.

Output (HT1) is compared with the reference voltage and the amount of error detected, being fed to pulse width modulator, alter the duty ratio of switching signal and stabilize HT 1.

Two thick film module incorporated are for setting of HT 1 and HV (EHT) limit circuit and no adjustemnt is necessary.

b) Replacement

If the repalcement of any component listed below is necessary, no spare parts should be repalced but those approved and appointedby HITACHI.

Component	Circuit No.
Voltage setting module	CP 901
Error amp. Transistor	TR 907
Resistor	R 928

After the replacement has been carried out, be sure to check and see that HT 1 output is within 110.0±3V.

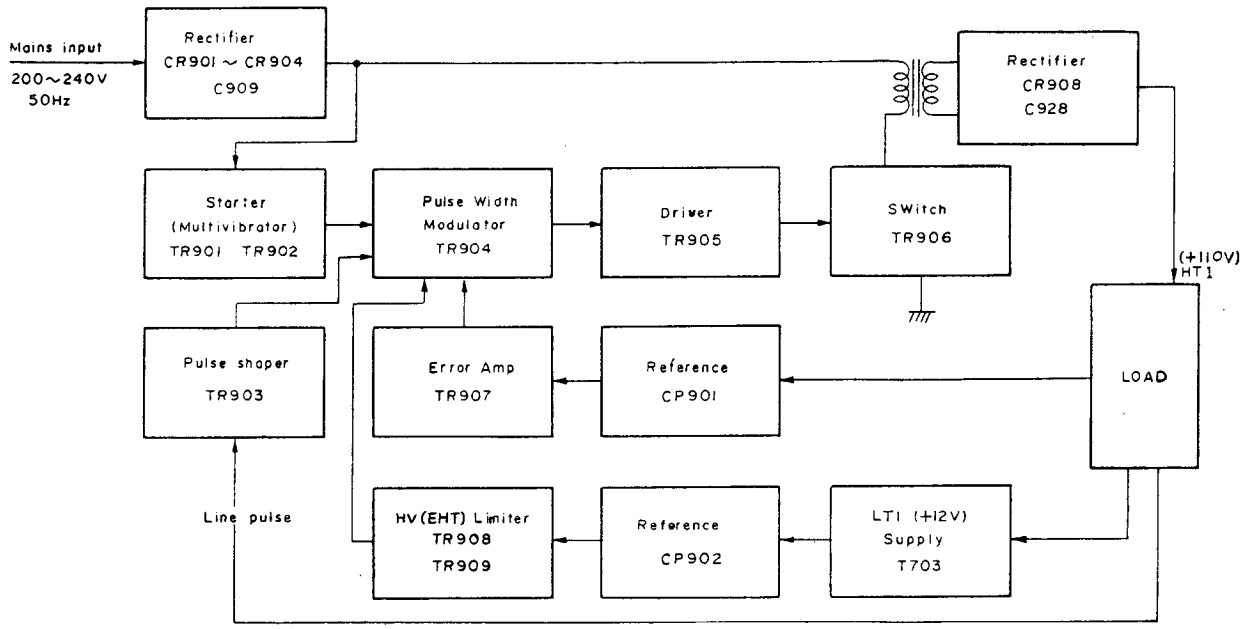


Fig. 2

c) Voltage setting module

The chassis incorporates newly developed thick film voltage setting modules.

These are for HT1 voltage setting and HV (EHT) limiting. The module includes two functions, voltage divider and reference voltage stage as shown in Fig. 3 (b).

Fig. 3 (a) shows a conventional error detector.

HT 1 output is divided by the resisotrs R1and R2, and compared with the reference voltage produced by CR1. The amount of error is amplified and fed back to stabilize the HT 1.

A conventioanl type has a potentiometer R2, which absorbs the component's tolerances as of resistor R1 etc., and alter the dividing ratio, therefore stabilized HT 1 is derived.

Fig. 3 (b) shows a error detector with the voltage setting module incorporated.

HT 1 is applied to the voltage divider (between terminal 1 and 5) and divided voltage is derived at termianl③. Between terminal ② and ④, the reference voltage is produced. The amount of error is amplified and fed back to stabilize HT 1.

The voltage divider, whose resistors are printed and trimmed, is preadjusted and fixed to obtain nominal HT1 value. Therefore no adjustment procedure is necessary.

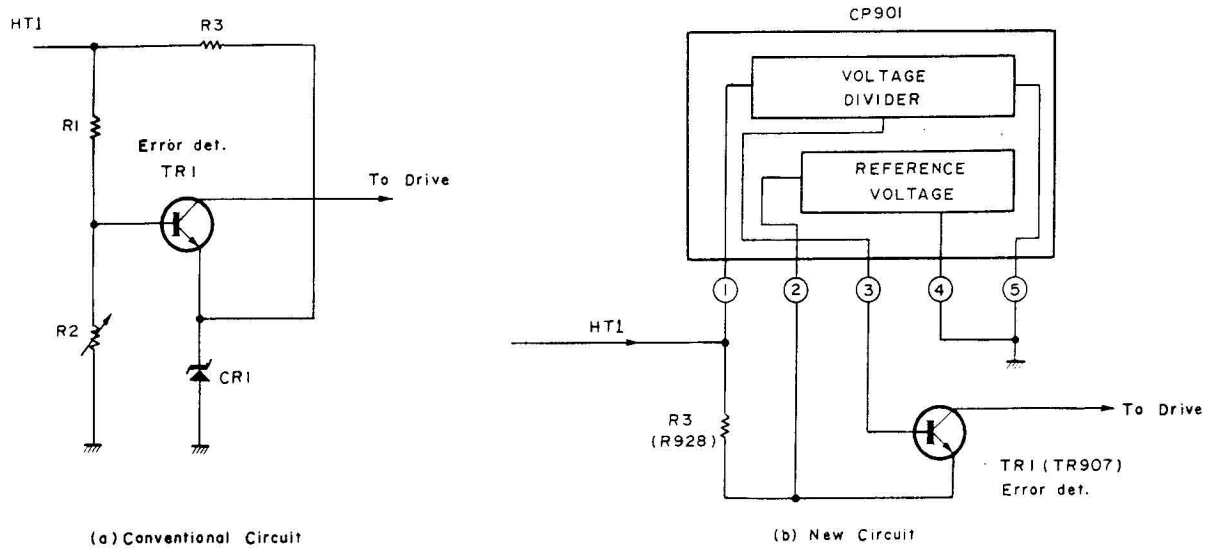


Fig. 3

2. HV (EHT) limit circuit

a) Circuit function

HV (EHT) limit circuit reduces EHT to zero potential when the EHT value exceeds the threshold level in case of a fault condition of the circuits.

This function assures to protect from excessive EHT and to maintain safety of the receiver.

Fig. 4 shows this circuit, adopted in NP6C chassis.

Rectified peak voltage from the LT 1 winding of the LOPT is fed to internal voltage divider of CP902 (between termianls ① and ⑤ .

Divided voltage at the terminal③ is applied to reference voltage stage of CP 902 (between termianls②and④) and additional resistor R931.

The voltage at the termianl ① is proportional to the EHT value, since both voltages being derived from the windings of the LOPT.

When the voltage at the termianl②increases, the current through R931 causes the voltage at the termianl④to increase and causes TR908 to conduct.

Since the thyristor (SCR) connection, once TR908 conducts TR909 also conducts and both transistors maintain their conduction.

Therefore, this HV (EHT) limit circuit ground the emitter of pulse width modulating transistor TR904 and stops driving, no output voltage is derived on HT 1 line.

From the circuit function described as above, this circuit is not operating at noraml condition, but the steady operation is required when the EHT rises excessively. Therefore CP902 is designed and produced to operate properly, absorbing normal tolerances of the components.

b) Replacement

If the repalcement fo any component listed below is necessary, no spare parts should be replaced but those approved and appointed by HITACHI.

Component	Circuit No.
Voltage setting module	CP902
LOPT	T703
EHT limit transistor	TR908
EHT limit transistor	TR909
LT 1 rectifing diode	CR705
Rectifing diode	CR709
Resistor	R931
Resistor	R934
Smoothing capacitor	C753
Smoothing capacitor	C932
Resistor	R932

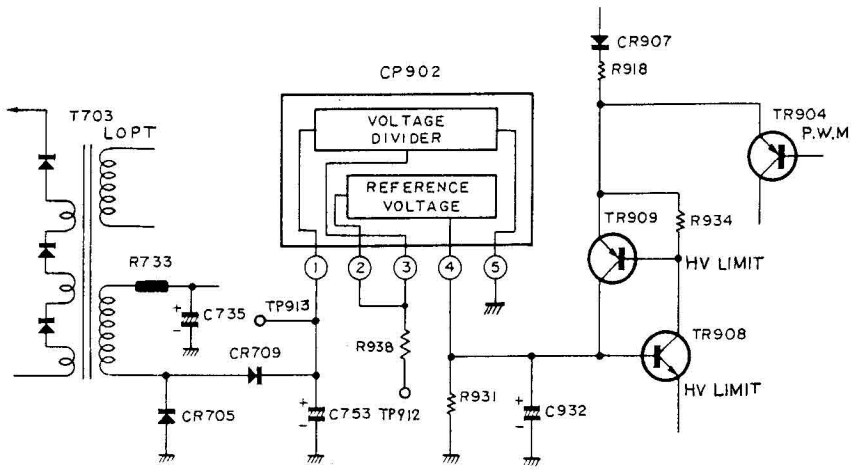


Fig. 4 HV (EHT) limit circuit

c) Operation Checking

Check the operation of the HV (EHT) limit circuit as described below, after the replacement is carried out.

1) Connect between TP-912 and TP-913 with a short link. – Fig. 4
2) See that the HV (EHT) limit circuit operates and HV (EHT) is ceased.
3) Turn off the mains switch and disconnect the short link.
4) See that the receiver operates normally when the set is turned on again.

3. Line oscillator circuit

Line oscillator coil (H. Hold coil-T701) is fixed with glue at the factory to prevent the H. Hold coil from being maladjusted for lower frequency resulting abnormal EHT in the receiver.

Therefore when you service the receiver, don't try to adjust or break the fixed H. Hold coil.

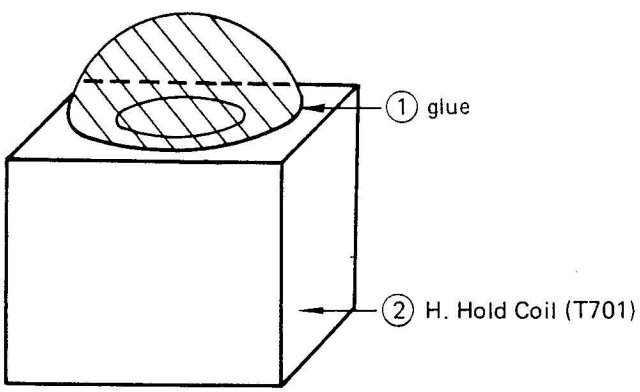
Please observe the following procedure when the adjustment of H. Hold is necessary.

The adjustment is required when any of the following parts have been replaced.

TR702 R715 R716 R717 R718 R721, R758 C710, C709

Adjustment procedure

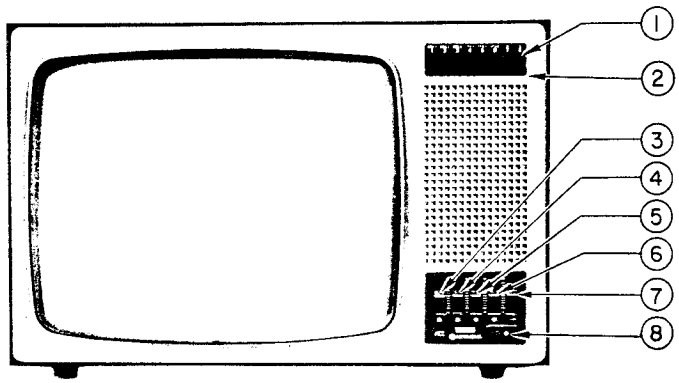
Step. 1; Replace the fixed H. Hold Coil (T701) with new one.
Step. 2; Turn the core of H. Hold Coil fully counter-clockwise.
Step. 3; Turn the receiver "ON".
Step. 4; Defeat the line synchronization by grounding the B2 terminal with a capacitor 10μF/50V.
Step. 5; Obtain line synchronization by turning the core of H. Hold Coil (T701) clockwise.
Step. 6; Turn the receiver "OFF".
Step. 7; Release the capacitor connected at Step. 4.
Step. 8; Fix the H. Hold Coil with glue as shown below.

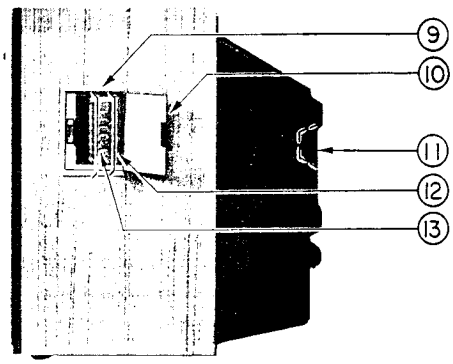


Parts name	Type No.	Parts No.	Remarks
glue	Polyamide hot melt adhesive Tru-Line No. 3 or Epoxy resin cemedine No. 1500	9485256 2784011	used at factory
glue	Epoxy resin cemedine No. 1500	2784011	used for servicing

Setp. 9; Confirm that the HV (EHT) limit circuit works correctly.
(Refer to the checking method in 2. c))

CONTROLS





1. PROGRAMME INDICATOR
2. PROGRAMME SELECTOR
3. TINT CONTROL
4. COLOUR CONTROL
5. BRIGHTNESS CONTROL
6. CONTRAST CONTROL
7. VOLUME CONTROL
8. MAINS SWITCH
9. PROGRAMME MEMORY BOX
10. PROGRAMME MEMORY BOX LID
11. AERIAL INPUT
12. CHANNEL POINTERS
13. CHANNEL TUNING KNOBS

TECHNICAL FEATURES

1. NEW STABILIZED POWER SUPPLY CIRCUIT (HT 1).
   HT 1 stabilizing circuit serves for stabilizing HT 1 output against supply mains fluctuations and/or load variations. In NP6C chassis, A newly developed switched mode power supply circuit is adopted.
   (a) Fully secured against short circuit.
   (b) Automatic shut off against faulty conditions in the line scan circuit, power supply circuit and EHT circuit.
   (c) No adjustment for HT 1 output is necessary.
   (d) No voltage setting against the difference of main supply voltage i.e. 240V is necessary.
   (e) Low power consumption - - 75W.

2. NEW COLOUR PICTURE TUBE.
   New HITACHI inline picture tube has been developed with high precision technology and skill.
   (a) Convergence-free tube system with newly developed saddle-toroidal type scan coil.
   (b) 76 deflection angle enables flat picture tube face.
   (c) Sharp and crisp picture with the precision gun and the large electron lenses.

3. NEW DIODE SPILIT TYPE LOPT.
   Newly developed diode split type LOPT is a combination of LOPT and tripler. It realizes higher efficiency and better reliability.

4. NEW IC.
   Newly developed one-chip monolithic chroma processing IC with automatic colour contrast control function realizes enhanced colour performance.

5. IC/TRANSISTORIZED CIRCUITS
   With the long experience of solid state technologyand the developments of colour television skill, HITACHI colour television incorporates IC, transistor circuits for stable quality, less power consumption, and high reliability.

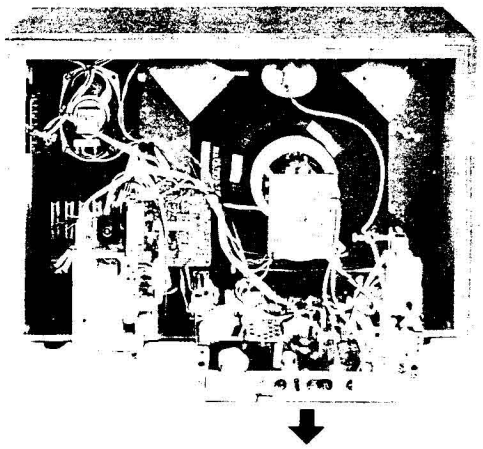
6. QUICK START.
   Quick start colour picture tube provides "Quick Start" feature without preheating method.
   After switching on the set, the picture comes out in around five seconds.

7. HIGH RELIABILITY AND SAFETY.
   Highly printed circuits, stabilized power supply, and various protection circuits assure highly reliable receiver performance. Adjustment-free aspect on stabilized high tention and excessive EHT limit circuit assure highly safe operation.

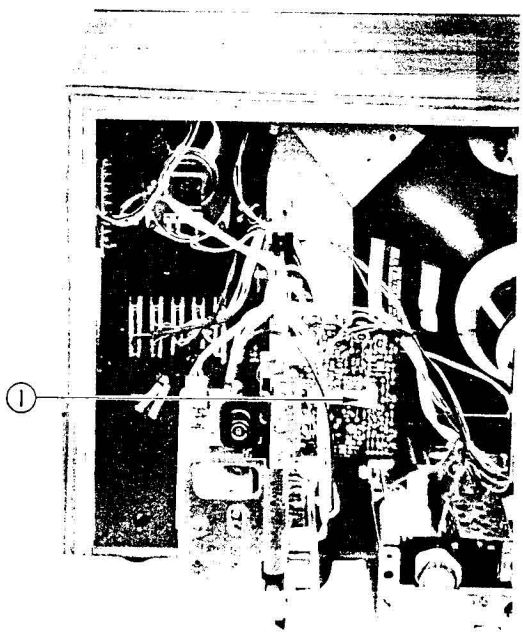
8. HIGH SERVICEABILITY.
   NP6C chassis consist of only two units and all components, including LOPT and power supplying circuit, are on the two units. Since this system reduced the numbers of the flying leads and connectors, better accessibility and easier diagnosis are realized.

DISASSEMBLY

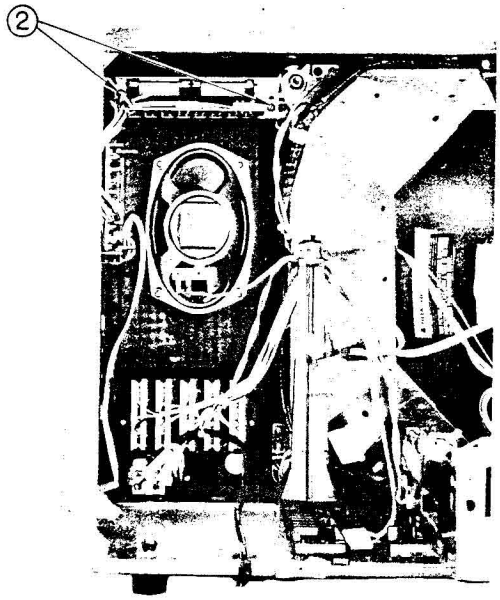
1. How to remove the Power supp./DEF chassis.
   1) Pull the chassis straight back as in Figure.



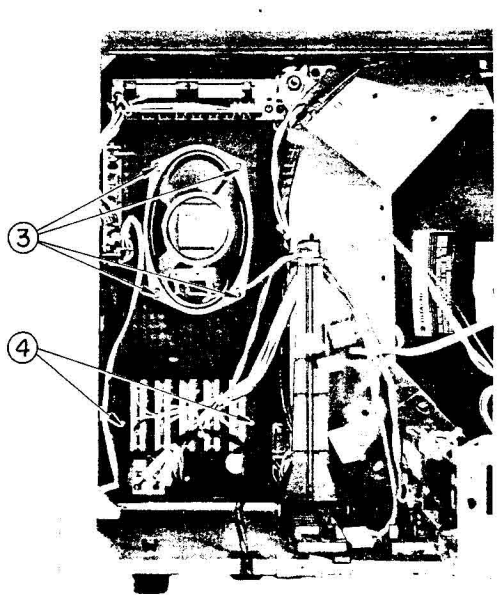
2. How to remove the chroma module.
   1) Releasing 1 plastic holder ①.



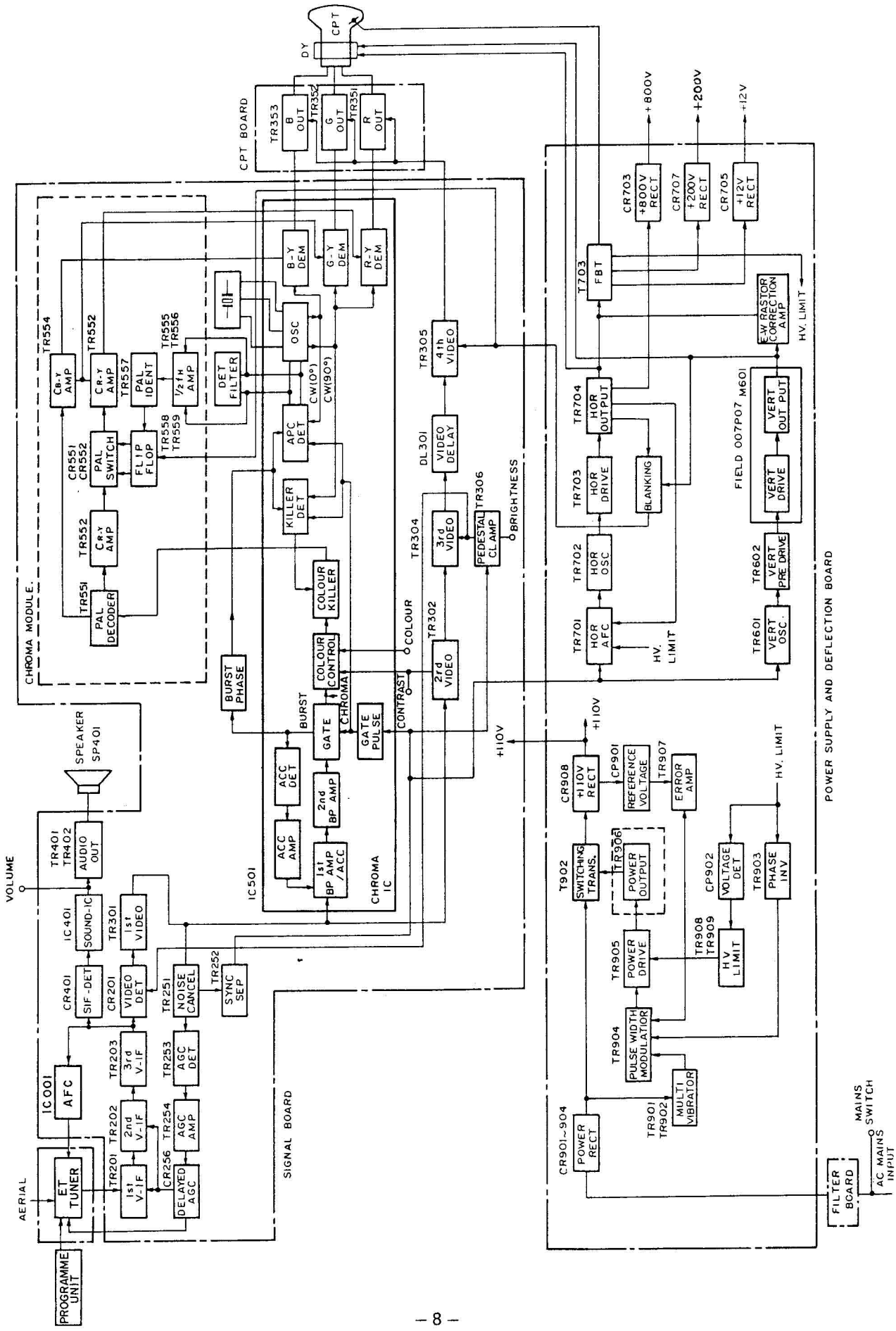
3. How to remove the programm unit.
   1) To remove the programm unit, loosen two screws (No. ②).



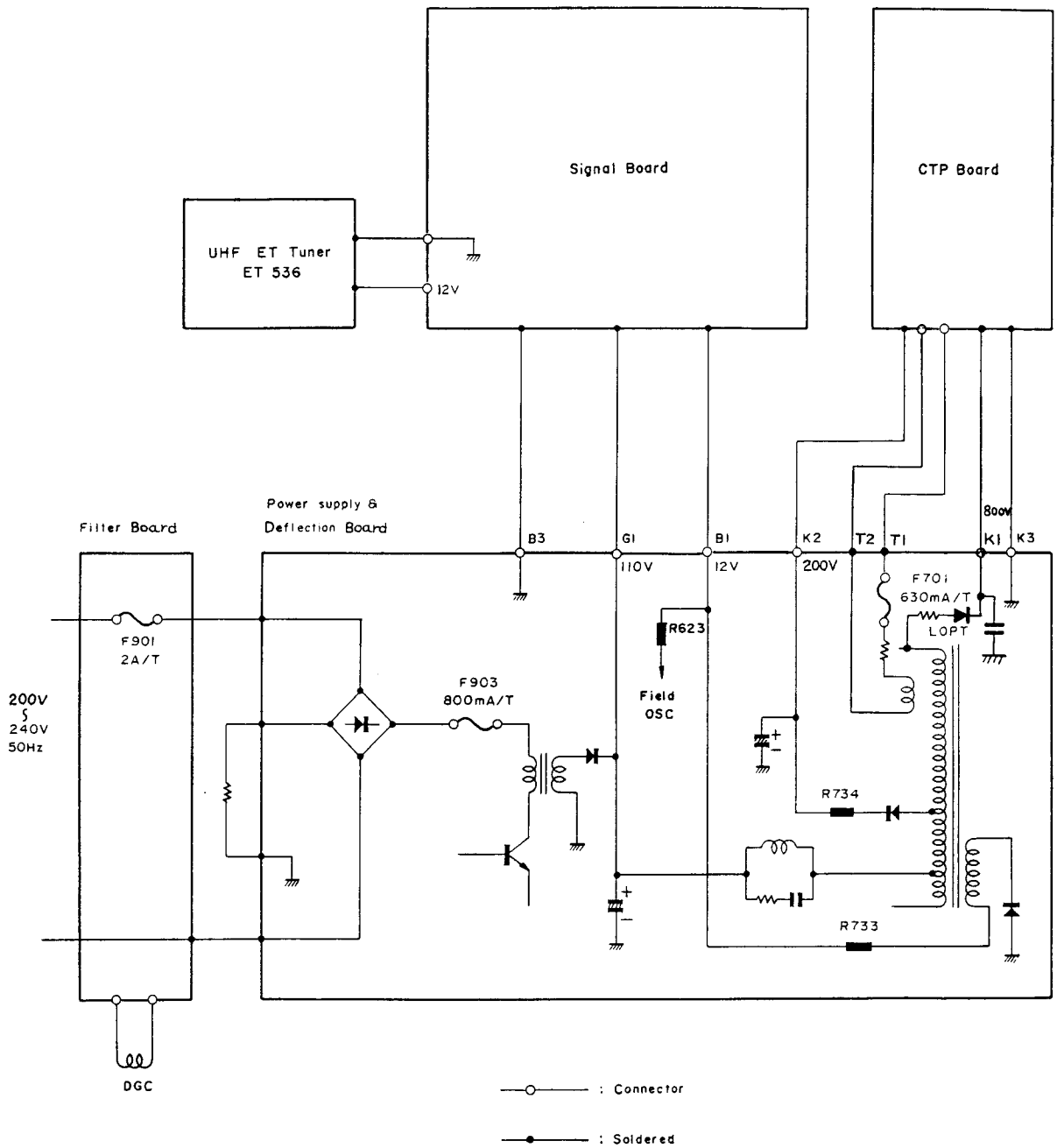
4. How to remove the speaker, control block.
   1) To remove the speaker, loosen four screws (No. ③).
   2) To remove the control block, loosen two screws (No. ④).



BLOCK DIAGRAM



VOLTAGE SUPPLY DIAGRAM



CONNECTION FOR ALIGNEMNT

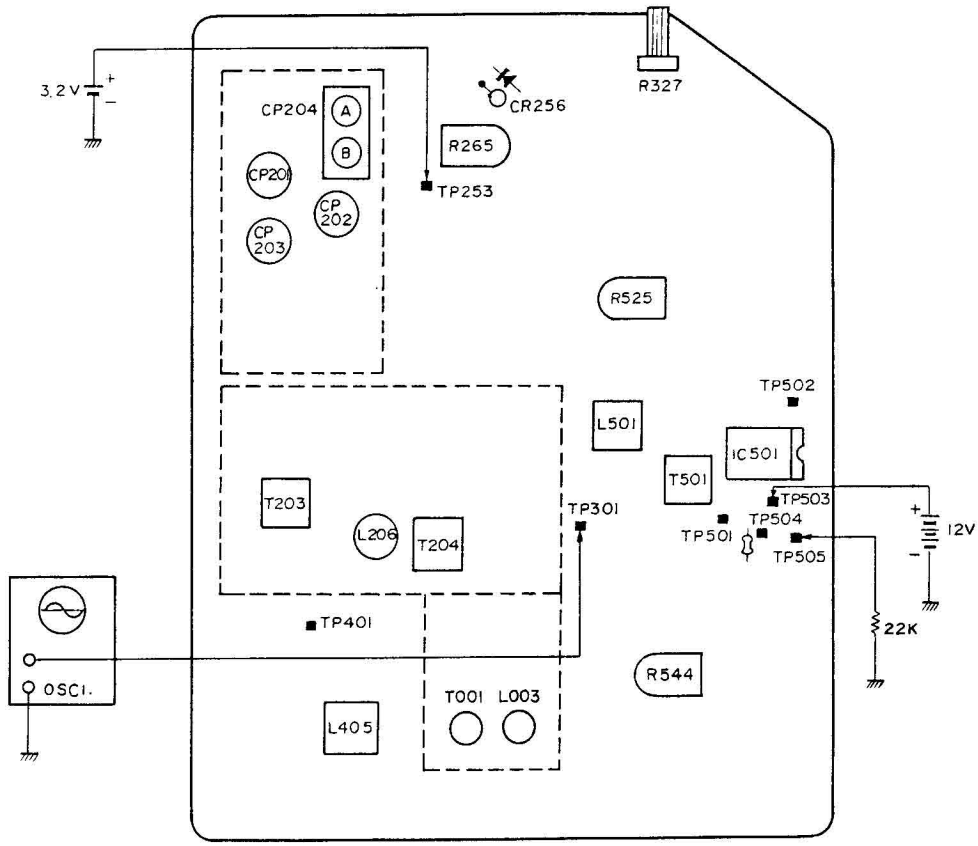


Fig. 5

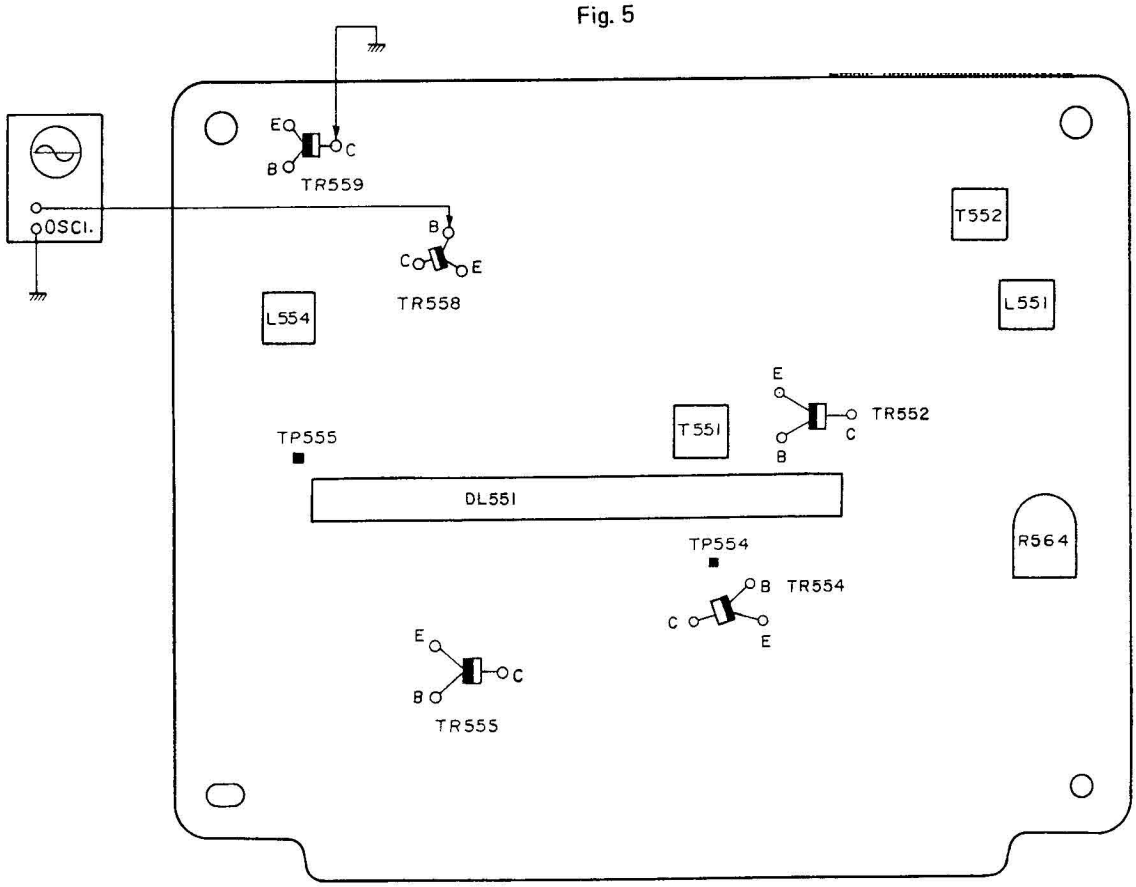
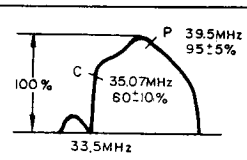
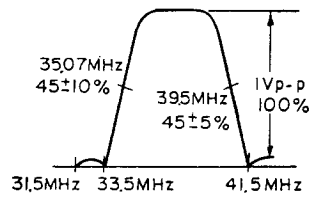


Fig. 6

PRIMARY ALIGNMENT

1. V-IF ALIGNMENT . . . . . Fig. 5, 6.
   Step 1) Supply +3.2V to TP253.
   Step 2) Supply +3.2V to TP253, and +5.6V to AGC terminal for the tuner;
   Step 3) Signal generator connect to collector of TR202 through 1000pF capacitor.

Step	Signal Generator	Oscilloscope	Alignment Circuit	Alignemnt	Result	Response
1	Collector TR 202	TP 301 (Emitter TR 301)	Rejector	L 206	33.5 MHz – min .	
				T 203 T 204	Response as right	
2	Tuner TP Wobbler Marker	TP 401	Rejector	CP 201	41.5 MHz – min.	
			Rejector	CP 202	31.5 MHz – min.	
			Rejector	CP 203	33.5 MHz – min.	
		TP 301 (Emitter TR 301)		CP 204	Response as right	

2. CHROMINANCE BANDPASS AMP. ALIGNMENT . . . . Fig. 5, 6.

(a) Supply + 3.2V to TP253 . . . . . V-IF AGC.
(b) Connect a signal generator (Wobbler with marker and V-IF generator) to the TP-tuner.
(c) Connect an oscilloscope the primary end of T501
(d) Align L501 and T501 so as to obtain the response as below.

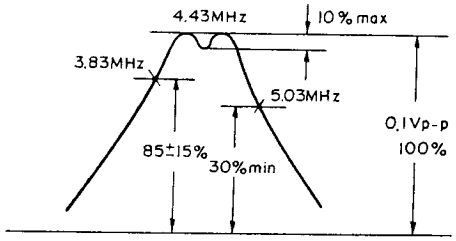


Fig. 7

note) Method of siganl generator conecting for above alignemnt.

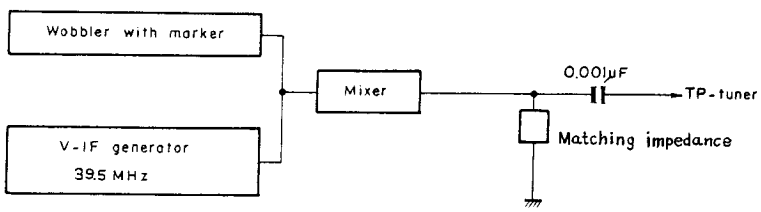
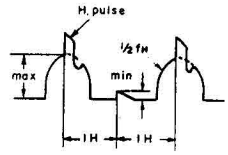
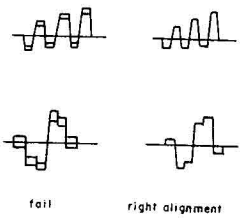


Fig. 8

3. Colour alignment . . . . . Fig. 6.

3.1 Primary alignment

Step	Alignment	Oscilloscope	Aligning	Result	Note	Oscillogram
1	Reference oscillator		R 525	Obtain colour synchronization.	Supply +12V to TP 503 Ground TP 505 through a resistor 22kΩ.	———
2	PAL identifi-cation	Base –TR 558	L 554	Response as right	Ground the collector of TR 559. This step should be carried out after Line frequency alignment.	
3	PAL decoder	Connector –(R–Y)	R 564 L 551 respectively	min. amplitude	only with colour-bar generator–"PAL OFF"	Refer to the next page on alignment with the electronic test card.
4	0° phase	Connector –(B–Y)	R 544	Adjust the time axis of the oscilloscope to obtain the super imposition of two lines. min. difference of succeeding lines.	Connect between both bases of TR 552 and TR 554.	
5	90° phase	Connector –(R–Y)	T 552			

3.2 Alignment with the electronic test card . . . Fig. 9.

Step	Alignment	Aligning	Result
1	PAL decoder	L 551	min. Hannover line on part cyan
		R 564	min. Hannover line on part +(R−Y), ± (B−Y)
2	0° phase	R 544	Part +(R−Y) colourless
3	90° phase	T 552	Part ± (B−Y) colourless

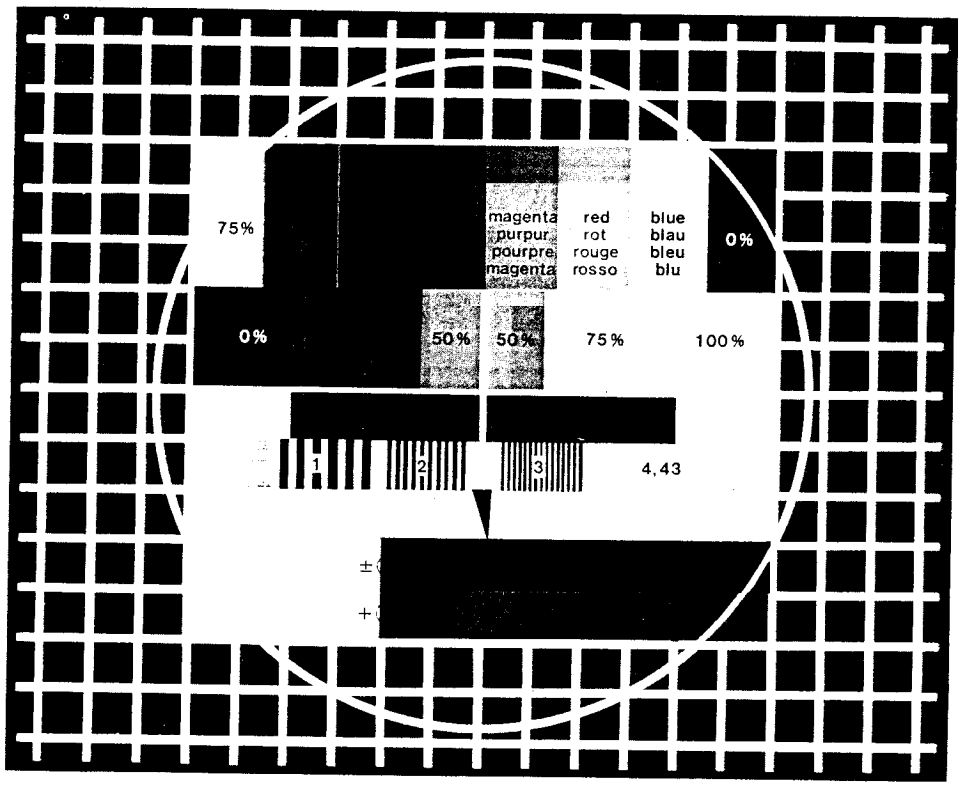


Fig. 9

4. S-IF ALIGNMENT

(a) Connect a AM Signal Generator to TP 401 as follow. Fig. 10.

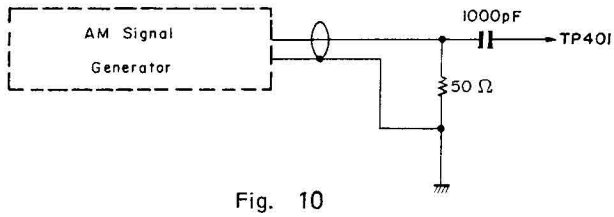


Fig. 10

(b) Connect an osilloscope to terminal F1.

(c) Set the AM Signal Generator as follow.

Carrier frequency :	6.0 MHz
Modulation :	400 Hz, 30%
Output :	−75dBm to −55dBm (34dBμ) (54dBμ)

(d) Align L405 to obtain minimum signal.

5. AGC DELAY ALIGNMENT.

(a) Adjust the input RF level to −56dBm. (53dBμ)

(b) Sock (warm up) the set at least 2 minutes.

(c) Connect a DC-Voltmeter to the both ends of CR 256.

(d) Align R265 so that the meter reads $0^{+0.1}_{-0}$V.

6. ALIGNMENT WITH BLACK AND WHITE PICTURE. . . .Fig. 11.

6.1 Horizontal (Line) frequency;
Set the R713 at the middle point. Ground the B2 terminal (on the signal board.) through a capacitor 10μF/50V and align T701 so as to obtain the correct line frequency. (See Technical PRECAU - TIONS 3.)

6.2 Picture width;
Connect the H. SIZE link to either S,M, or L to obtain the correct picture width.

6.3 Horizontal centering;
Connect the H. CENT. link to either R or L to obtain the correct horizontal centering.

6.4 Sub H. HOLD;
If the horizontal picture phase is shifted, adjust R713. .

6.5 E-W correction (Side pincushion)
Adjust R750 so as to obtain the minimum side pincushion distortion.

6.6 Vertical (Field) frequency;
Connect TP 601 with TP 603 by a resistor 15kΩ.
Adjust R605 so as to obtain the correct field frequency.
Note)
This step should be checked again after carring out steps 6.7, 6.8, 6.9.

6.7 Picture height :
Adjust R 607 so as to obtain the correct picture height.

6.8 Vertical centering ;
Adjust R 622 so as to obtain the correct vertical centre.

6.9 Vertical linearity ;
Adjust R 609.

6.10 Focus;
Adjust R 740.

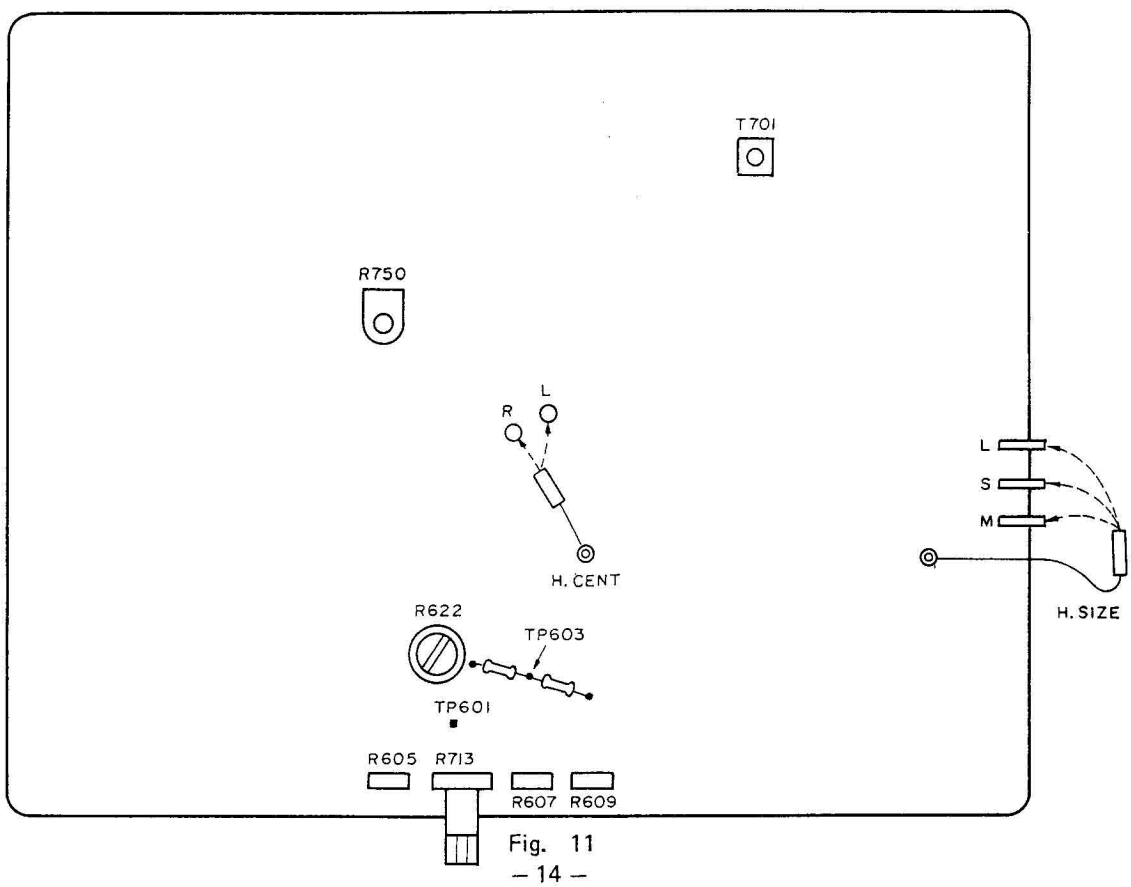


Fig. 11

7. GREY SCALE TRACKING..... Fig. 12.

The receiver should be soaked (warm up) at least 10 minutes before carring out the adjustments.

Set the tint control at its middle position.

(a) Receive a white raster test card and set the Drive controls (R 857 & R 863) at their middle positions.

(b) Turn the Back Ground Level (BGL) controls (R 865, R 859 & R 853) fully counterclockwise. (The picture will be darkened.)

(c) Turn the Screen control (R 872) fully counterclock-wise.

(d) Set the Contrast control at its minimum.

(e) Disconnect the Y-connector from the signal board and connect TP 602 with TP 603 with a short link. (Field oscillator defeats.)

(f) Turn up the Screen control (R872) gradually until one of three coloured lines faintly appears on the screen. (e.g. blue)
Unless any coloured line comes out, turn the Screen control fully clockwise, then adjust the Blue—, Red— and Green-BGL controls so that three coloured lines equally appears on the screen.

(g) Keep one of the BGL-controls which corresponds to above colour (e.g. Blue-BGL R 865) at it is, and turn up other two controls (e.g. R 853, and R 859) until their coloured lines also faintly appear on the screen.

(h) Disconnect the short link from TP 602 and TP 603 (Field oscilator operates.), and connect the Y-connector to the signal board.

(i) Turn the Contrast control fully counterclockwise and turn the Brightness control fully counterclockwise.
Set the Sub-brightness control (R 327) so that the white raster faintly appears on the screen.

(j) Adjust those two BGL-controls (e.g. R 853 and R 859) so that the correct grey scale tracking at low bright-ness is obtained.

(k) Turn up the Contrast control and adjust the Drive controls (R 857 and R 863) so that the correct grey scale tracking at high birghtness is obtained.

(l) Turn down the Contrast control and check the correct grey scale tracking at low brightness.
Otherwise readjust those two BGL-controls (e.g. R 853 and R 859) for the correct grey scale tracking.

(m) Repeat steps (k) and (l) several times, until the ideal grey scale tracking is obtained under whole brightness range.

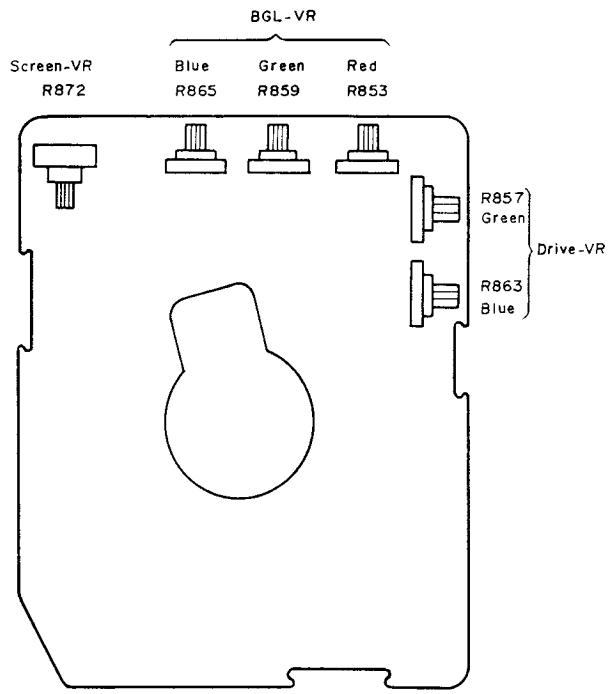


Fig. 12

8. SUB BRIGHTNESS ALIGNMENT. .....Fig. 13

(a) Set the Brightness control at its middle position and the contrast control at its minimum.

(b) Release the field locking by V. hold control (R605) and let the blanking aprt appear on the screen and stand still as possible as you can.

(c) Observe the black level of part A, and turn up the Sub brightness control (R 327) gradually until that level can be noticed to turn grey.

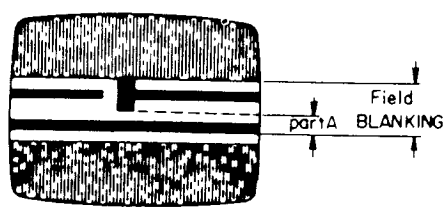


Fig. 13

9. CONVERGENCE ALIGNMENT. .....Fig. 14

1) NP6C chassis television receiver incorporates new colour picture tube system, i.e. HITACHI. flat face inline type tube, saddle-troidal scan coil and convergence-free features.
   Since the convergence quality is strictly controlled in the factory and to be secured its performance after installment, the reconvergence is not normally required.
   When it is needed in case of the replacement of a picture tube or a scan coil etc., please read and follow the the adjustment procedure step by step to obtain the best results, because this is rather different from the conventional tube system.
2) Set the television receiver facing to the south, and soak it at least 10 mins.
   Check the horizontal and vertical linearity, the picture width, and the focus as already described on the previous pages.
   Receive a cross-hatch test card.
3) In case of the replacement fo the picture tube, wind the adhesive tape (bandage type is preferable) around the neck, for securing purpose of scan coil.

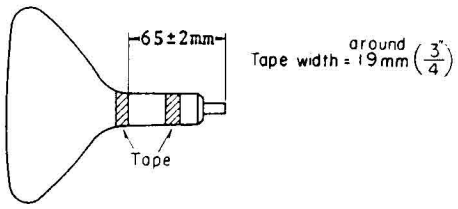


Fig. 14

10. PURITY ALIGNMENT . . . . Fig. 15, 16. 17

As before proceeding the below, please undergo preliminary static convergence adjustment on this page.

1) Push the scan coil fully up to funnel part of the picture tube. Disconnect the (G-Y) plug from the signal board and see the broad mazenta belt appears on the screen . . . Fig. 15 (a).
2) Pull out the scan coil gradually towards you and see that two oval parts (coloured pale yellow and light blue) appear on each side of the screen . . . Fig. 15 (b).
3) Rotate the purity magnet (c) (Fig. 16), and set two coloured parts to become equal in area. . . . Fig. 15(c).
4) Insert preliminary rubber wedge between the funnel and the scan coil at the top position, and tilt the scan coil backward at the top.
5) Pull out the scan coil gradually towards you again until two coloured parts disappear simultaneously. See that the white purity (connect (G-Y) plug) is all right, if not, pull out the scan coil until ideal white purity is obtaine ed. Fasten the scan coil securely by tightening the screw
6) Unless the red purity (disconnect both (G-Y), (B-Y) plugs) is obtained, repeat the steps 2) ~ 5) again.

Note) Put the purity-convergence magnet assembly on the picture tube neck, so that the edge of tightning ring isolated 32 mm from the tip of the neck. . . Fig. 16. Secure it firmly by tightning the screw.

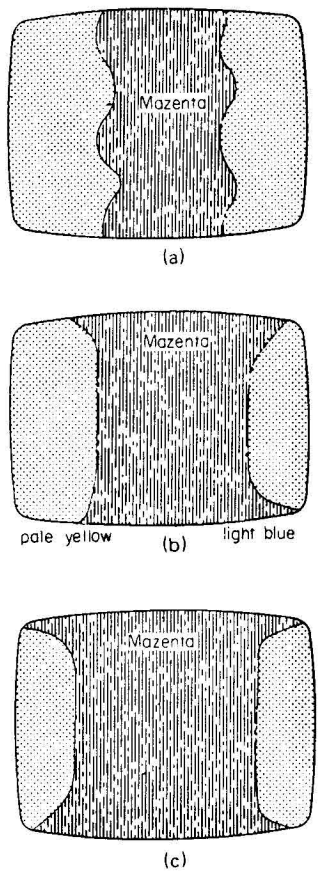
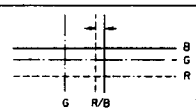
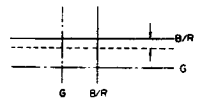
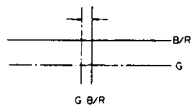
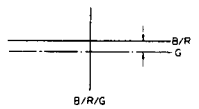


Fig. 15

11. STATIC CONVERGENCE ALIGNMENT.....Fig. 16 and Fig. 17.

This procedure is the convergence alignment for the centre part of the screen.

Step	Convergence lines	Magnet (Fig. 16)	Movement (Fig. 17)	Centre of the screen
1	Vertical Blue and Red	4 poles (A)	sliding (a)	
2	Horizontal Blue and Red	4 poles (A)	rotating (b)	
3	Vertical B/R and Green	6 poles (B)	sliding (a)	
4	Horizontal B/R and Green	6 poles (B)	rotating (b)	
5	Repeat steps 1) through 4).			
6	If the correct convergence is not obtainable after carring out the steps 1) through 5) above, dispalce the purity-convergence magnet assembly along the neck of the picture tube within the range of ±5 mm and repeat steps1) through 5).			

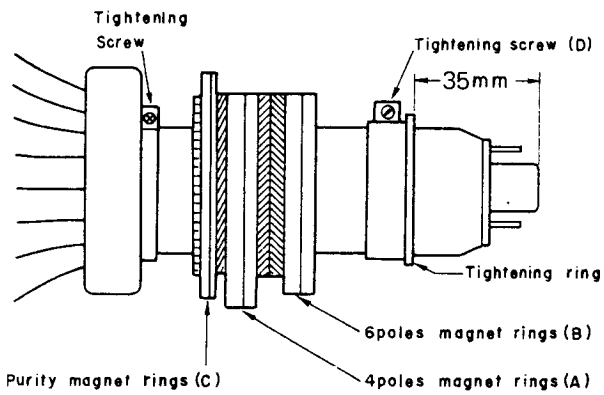
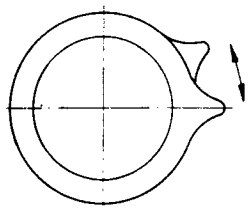
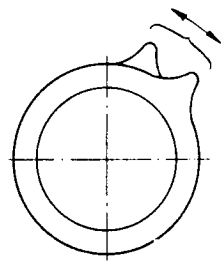


Fig. 16



Sliding two magnet ring tabs toward or away from each other



Rotating both magnet rings together

Fig. 17

12. DYNAMIC CONVERGENCE ALIGNMENT

This procedure is the convergence alignment for the circumference of the screen.

1) Push in the preliminary rubber wedge between the funnel part and scan coil gradually until both holizontal and vertical lines are converged at the circumference of the screen. . . Fig. 18.

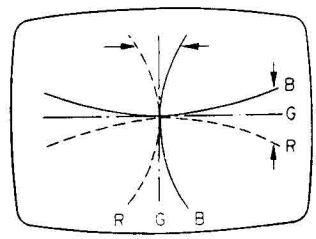
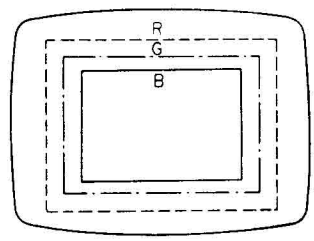


Fig. 18

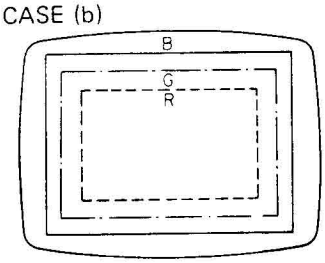
2) Proceed the either case according to the arrangements on the screen. . . Fig. 19 (a) and (b).

CASE (a)



(a)

CASE (b)



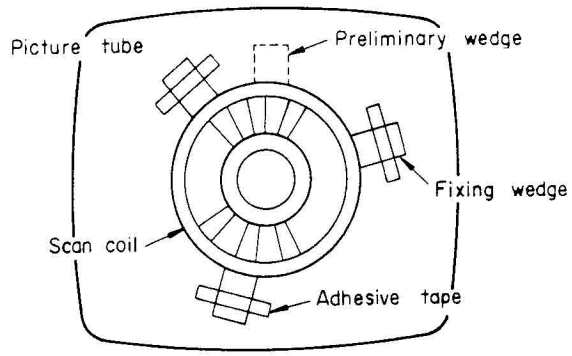
(b)

Fig. 19

CASE (a)

i) Insert fixing wedge at 9 o'clock position, until three coloured squares are converged.

ii) Insert two fixing wedges at 1 and 5 o'clock positions and fix three wedges by highly adhesibe tape. Then pulll up preliminary wedge.



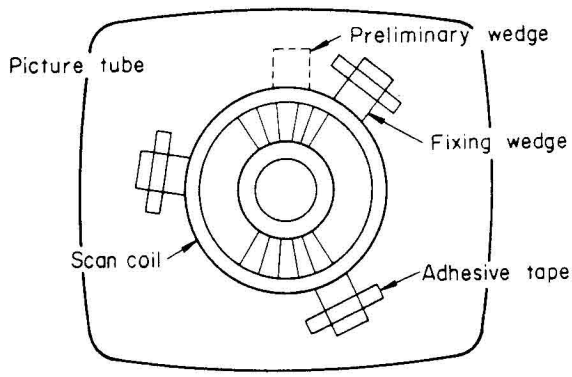
(a)

Fig. 20

CASE (b)

i) Insert fixing wedge at 3 o'clock position, until three coloured squares are converged.

ii) Insert two fixing wedges at 7 and 11 o'clock positions and fix three wedges by highly adhesive tape. Then pull up the preliminary wedge.



(b)

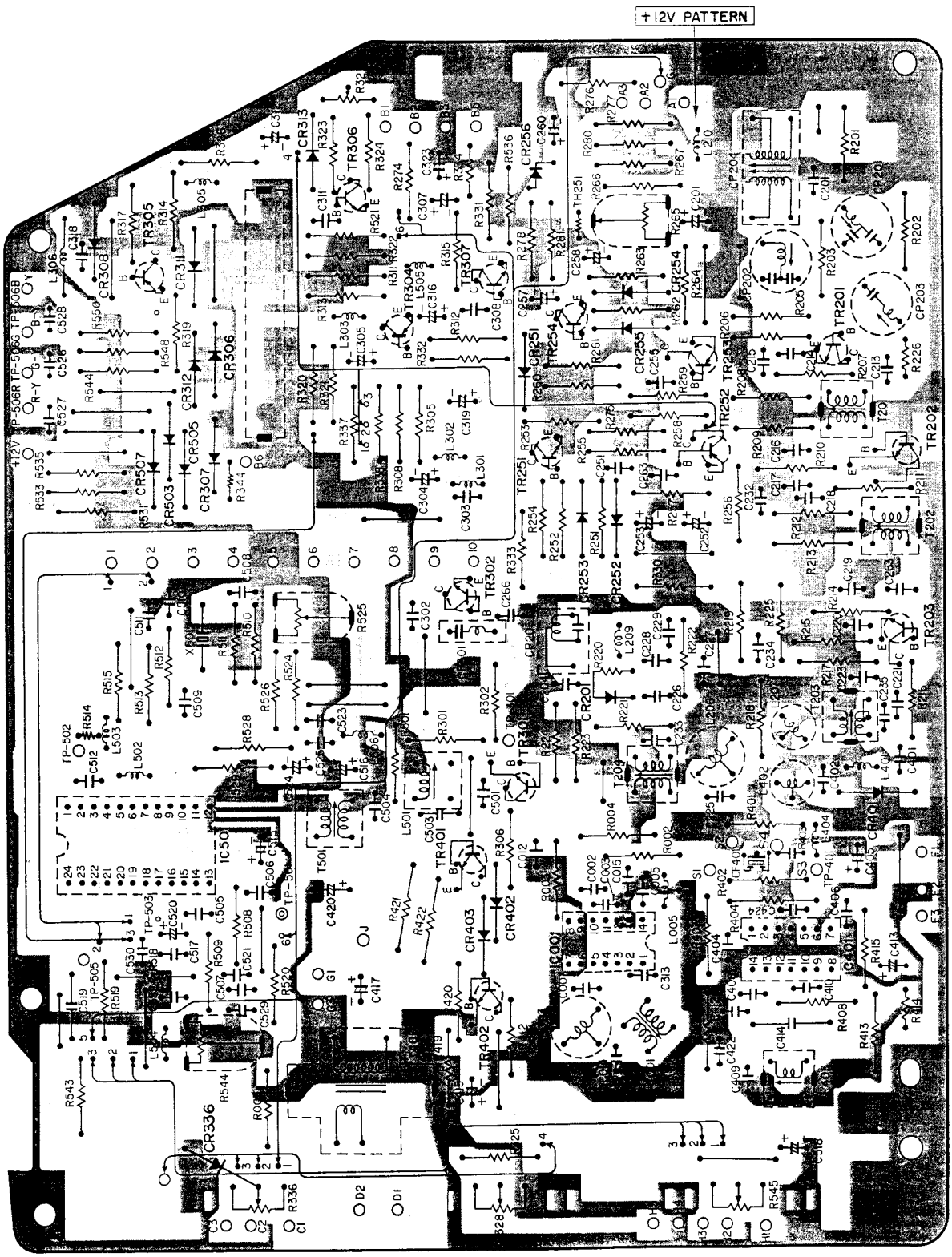
Fig. 21

PRINTED WIRING BOARD DIAGRAM
SIGNAL BOARD

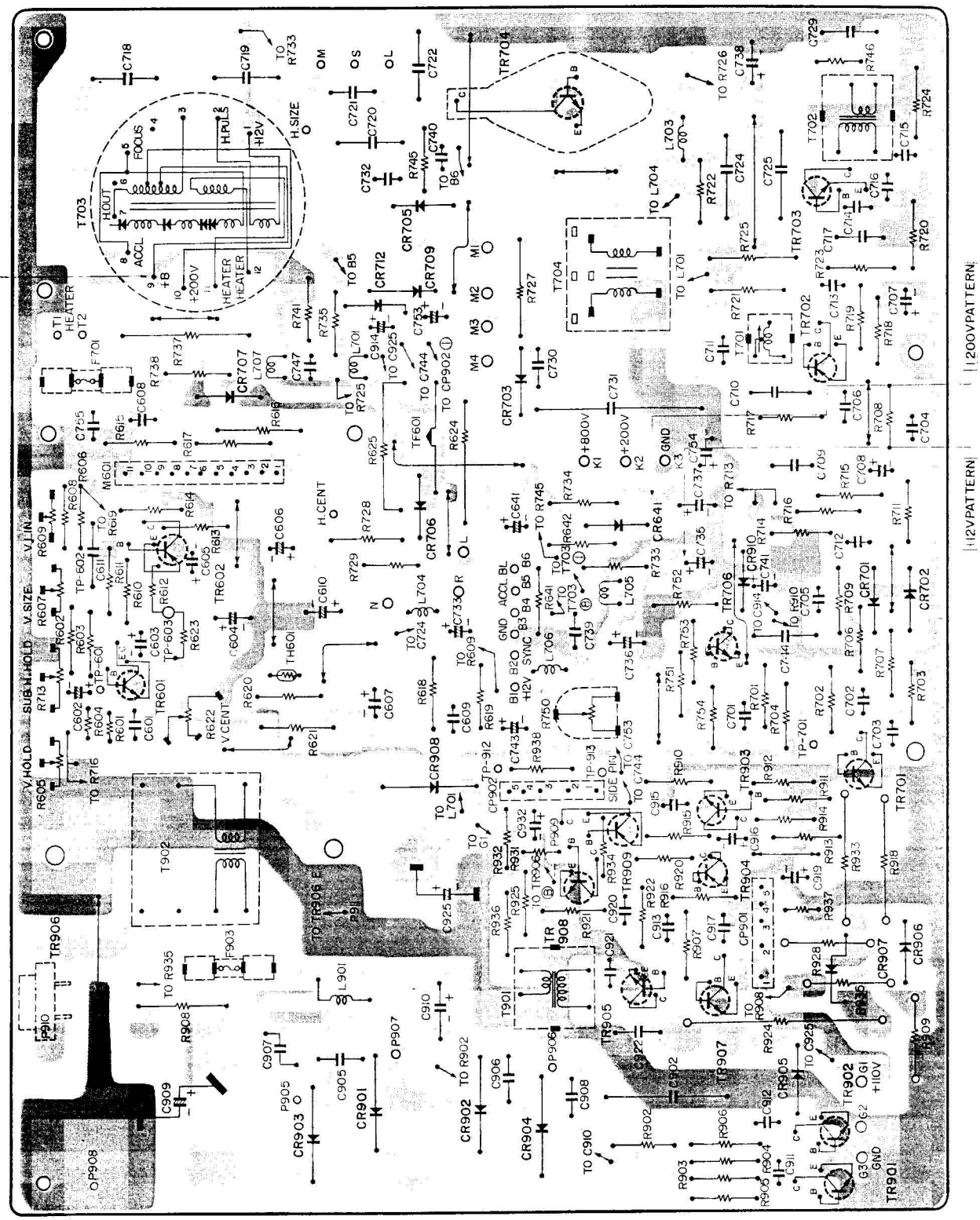
..... +B PATTERN

..... SIGNAL PATTERN

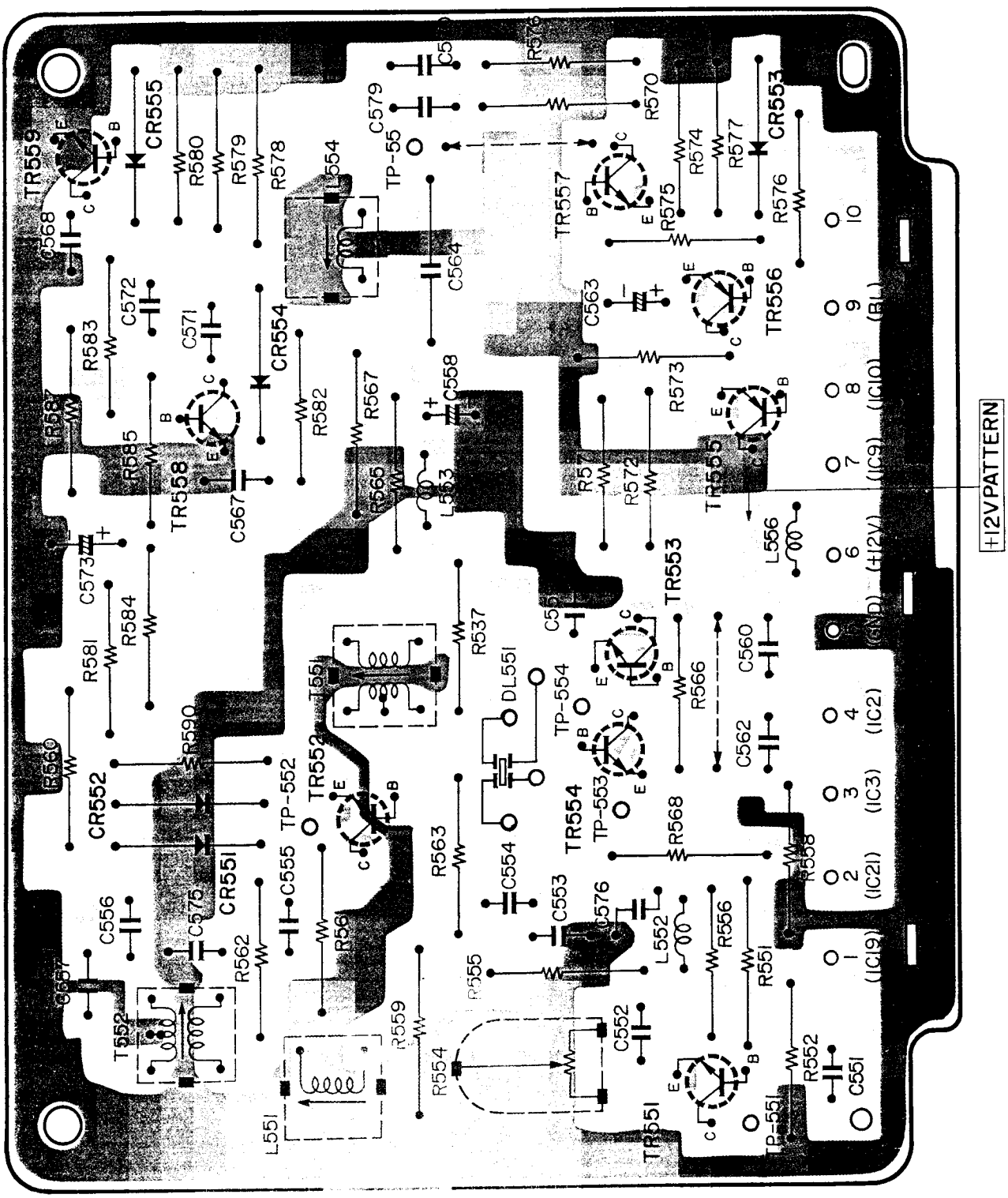
..... GROUND PATTERN



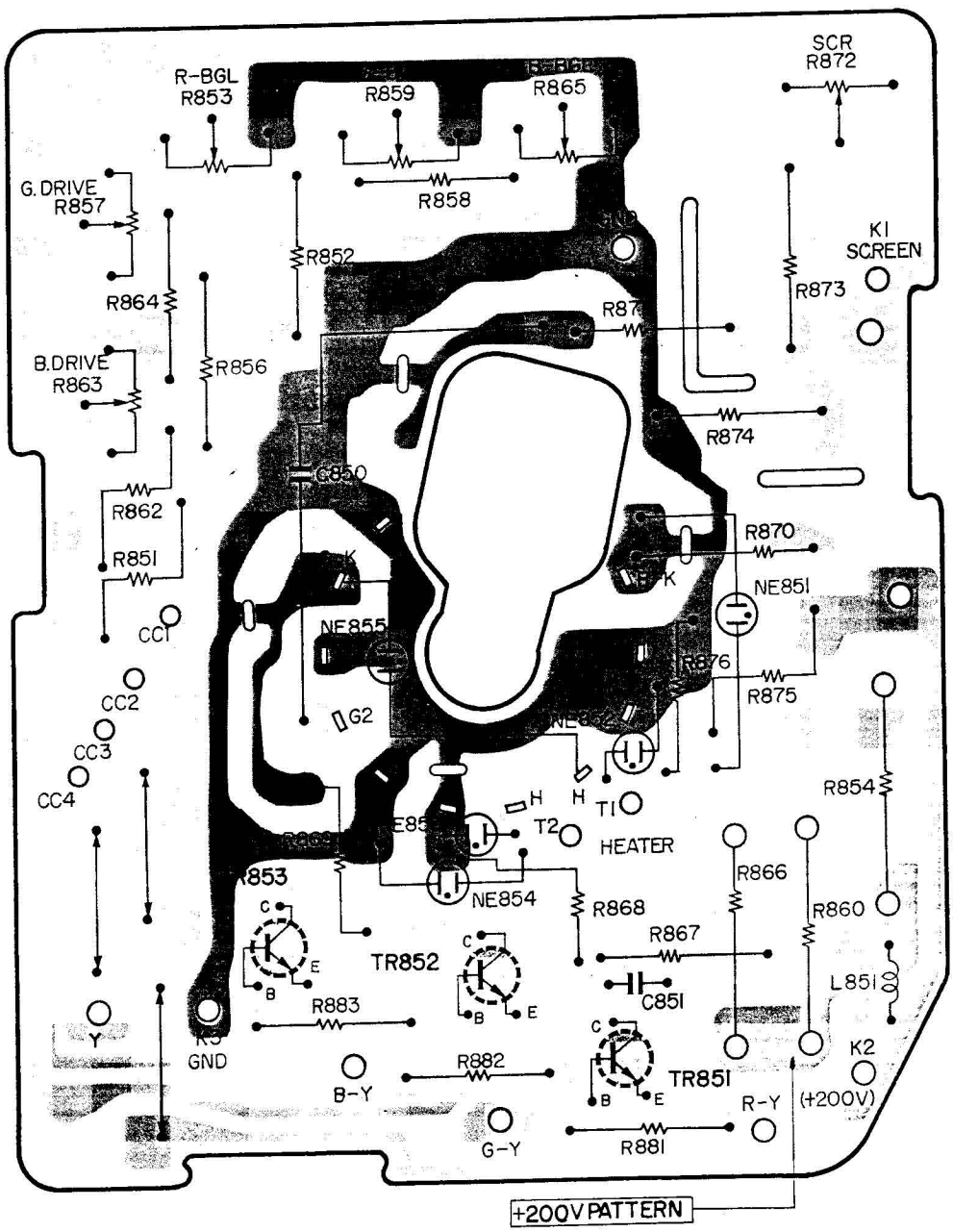
POWER SUPPLY/DEF. BOARD



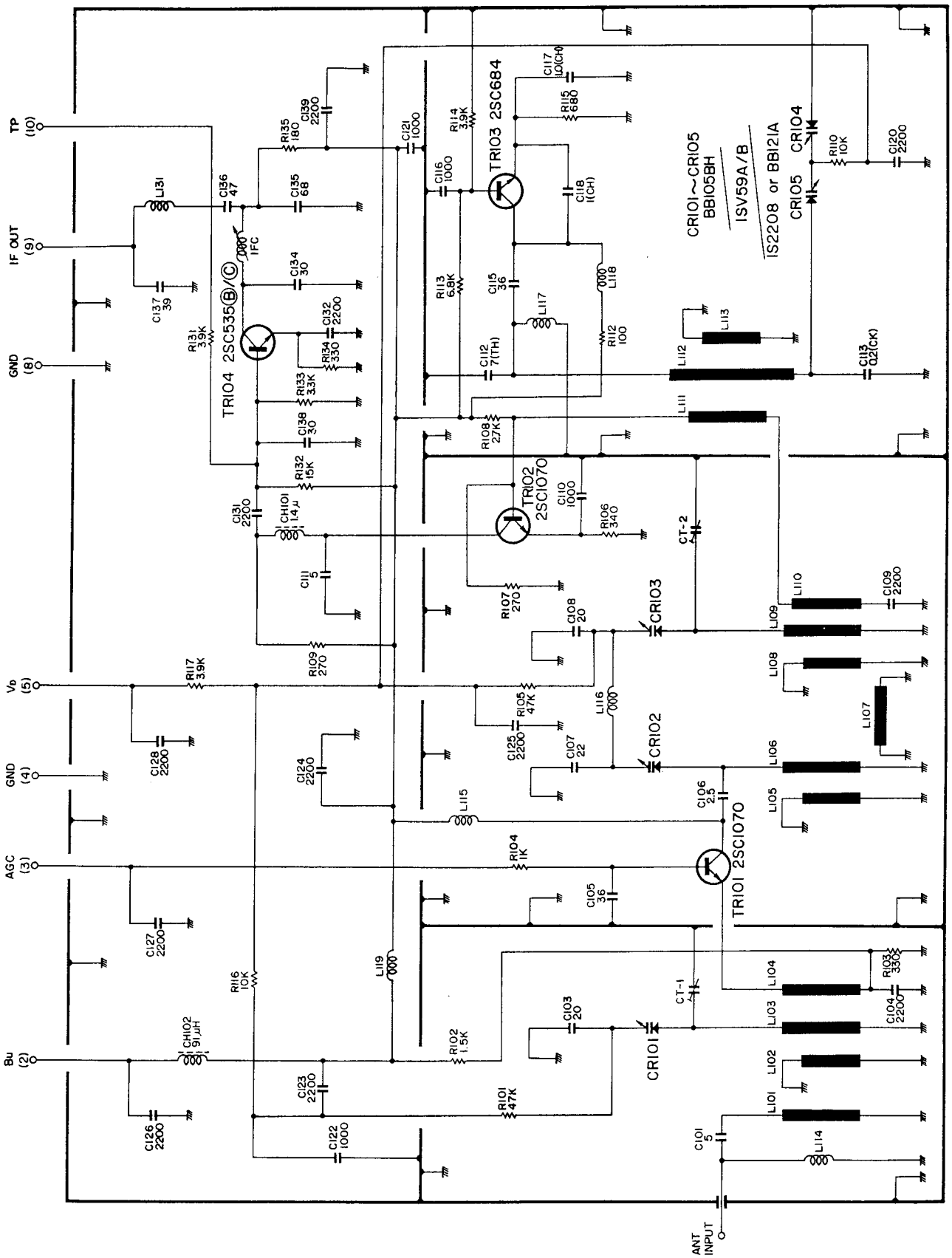
CHROMA MODULE



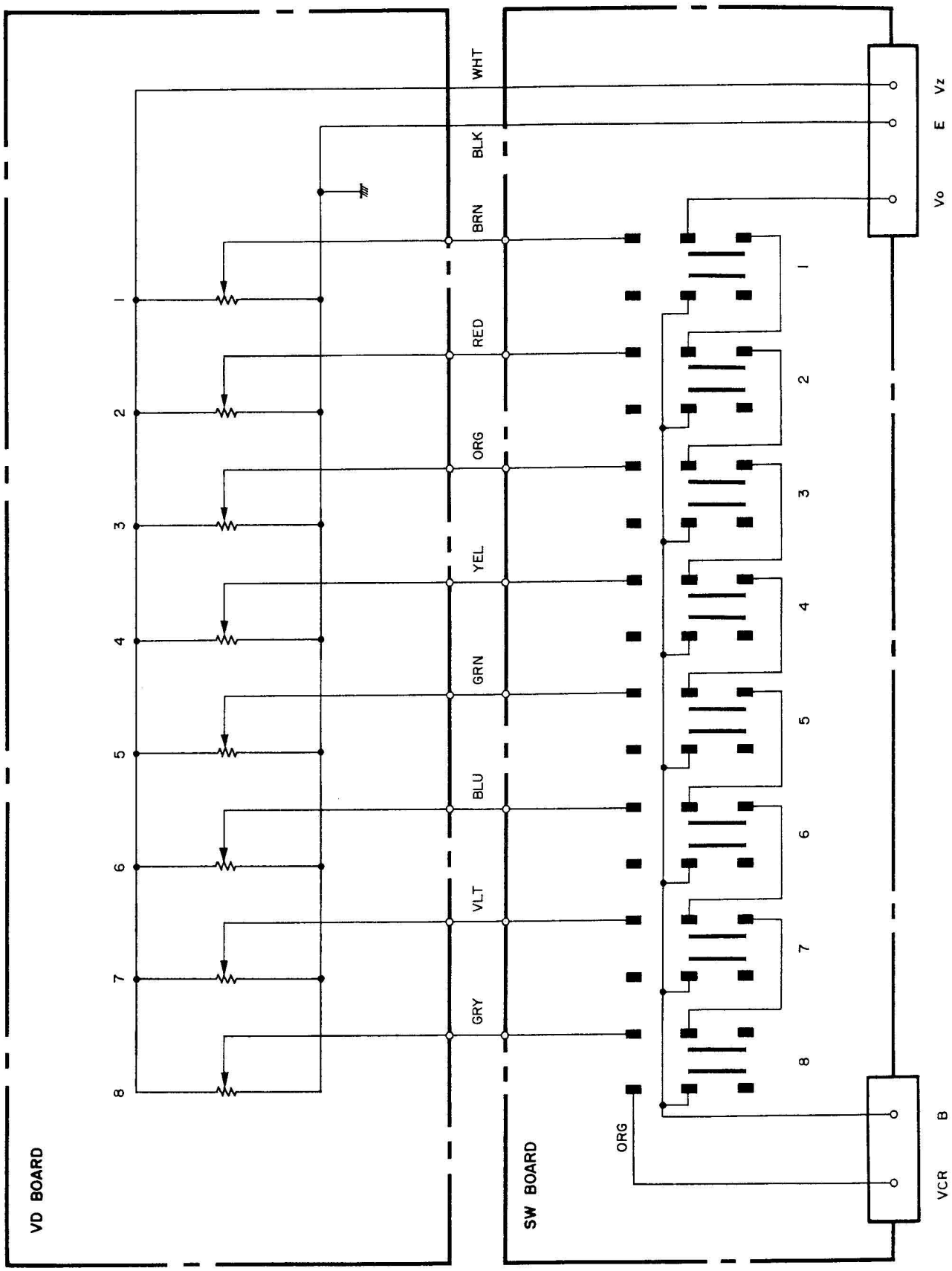
C.P.T. BOARD

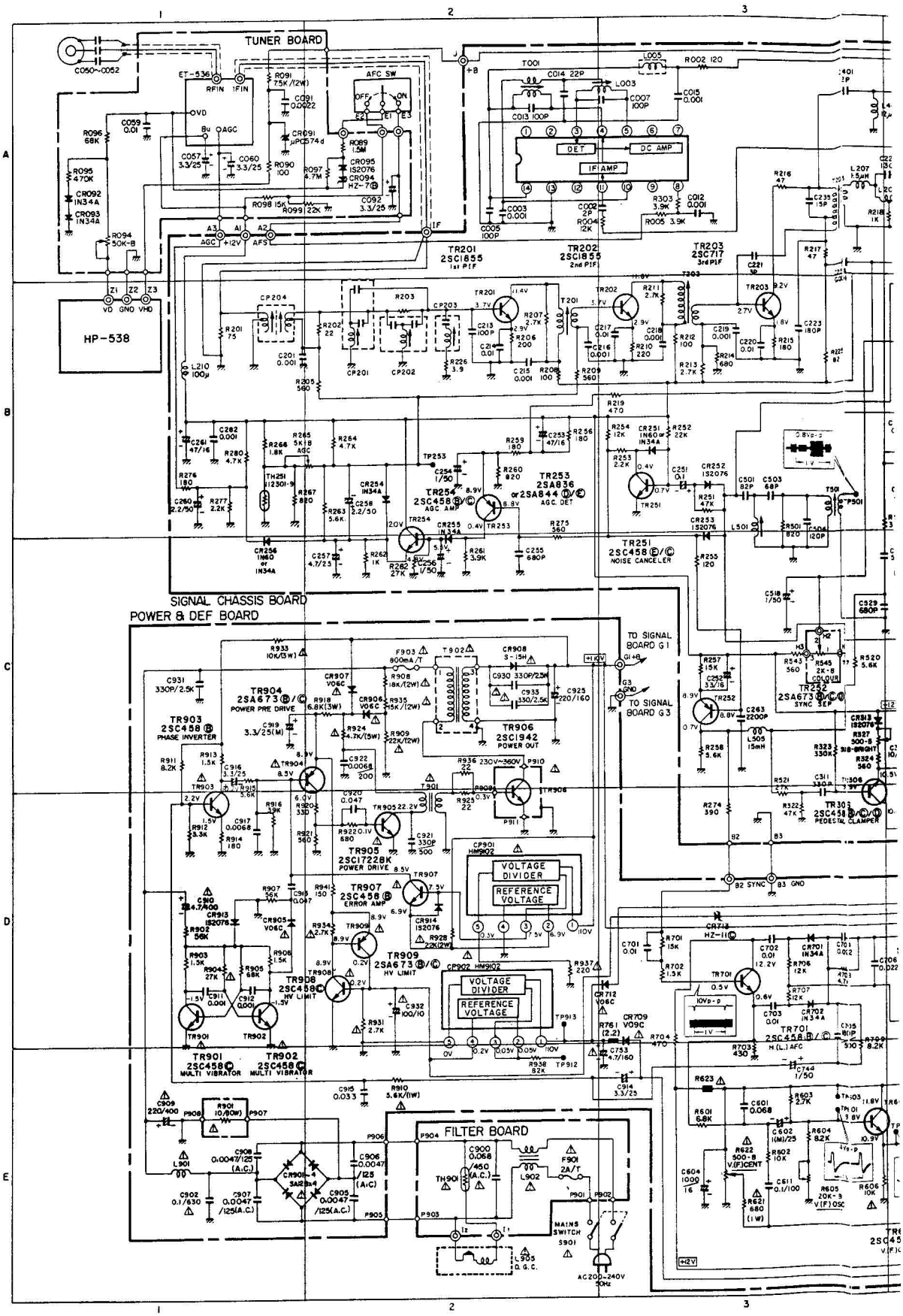

SCR
R872
R-BGL
R853
R859
R865
G. DRIVE
R857
R858
R852
K1
SCREEN
R873
R864
R87
B.DRIVE
R863
R856
R874
C850
R862
R870
R851
K
K
NE851
CC1
NE855
R876
R875
CC2
G2
CC3
CC4
H
H
T1
T2
HEATER
R854
R866
R860
NE854
R868
R867
TR852
C851
L851
R883
Y
GND
B-Y
R882
TR851
K2
(+200V)
R-Y
G-Y
R881
+200V PATTERN

TUNER CIRCUIT SCHEMATIC DIAGRAM (ET-536)

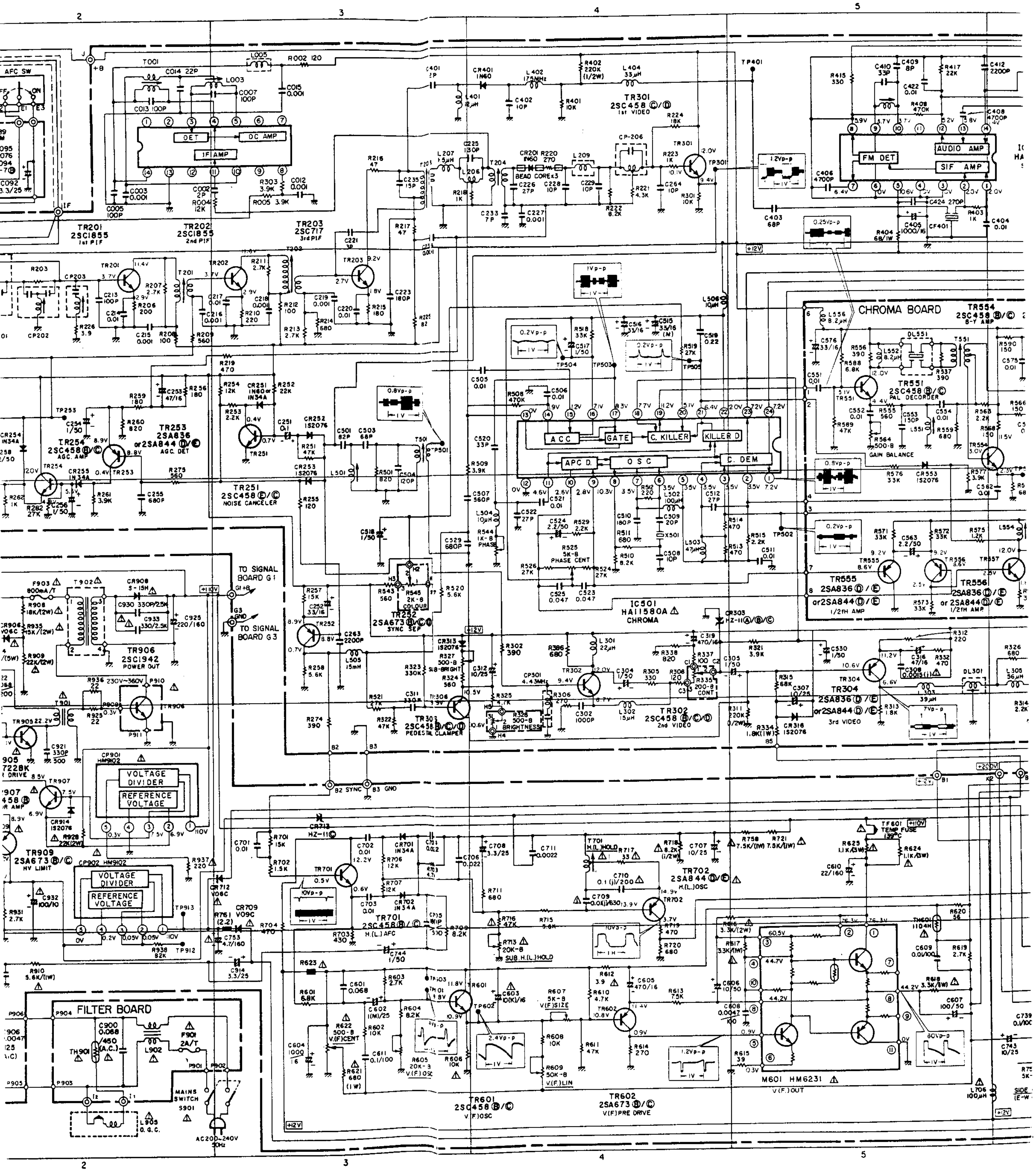


PUSH BOTTOM SELECTOR CIRCUIT (HP-538)



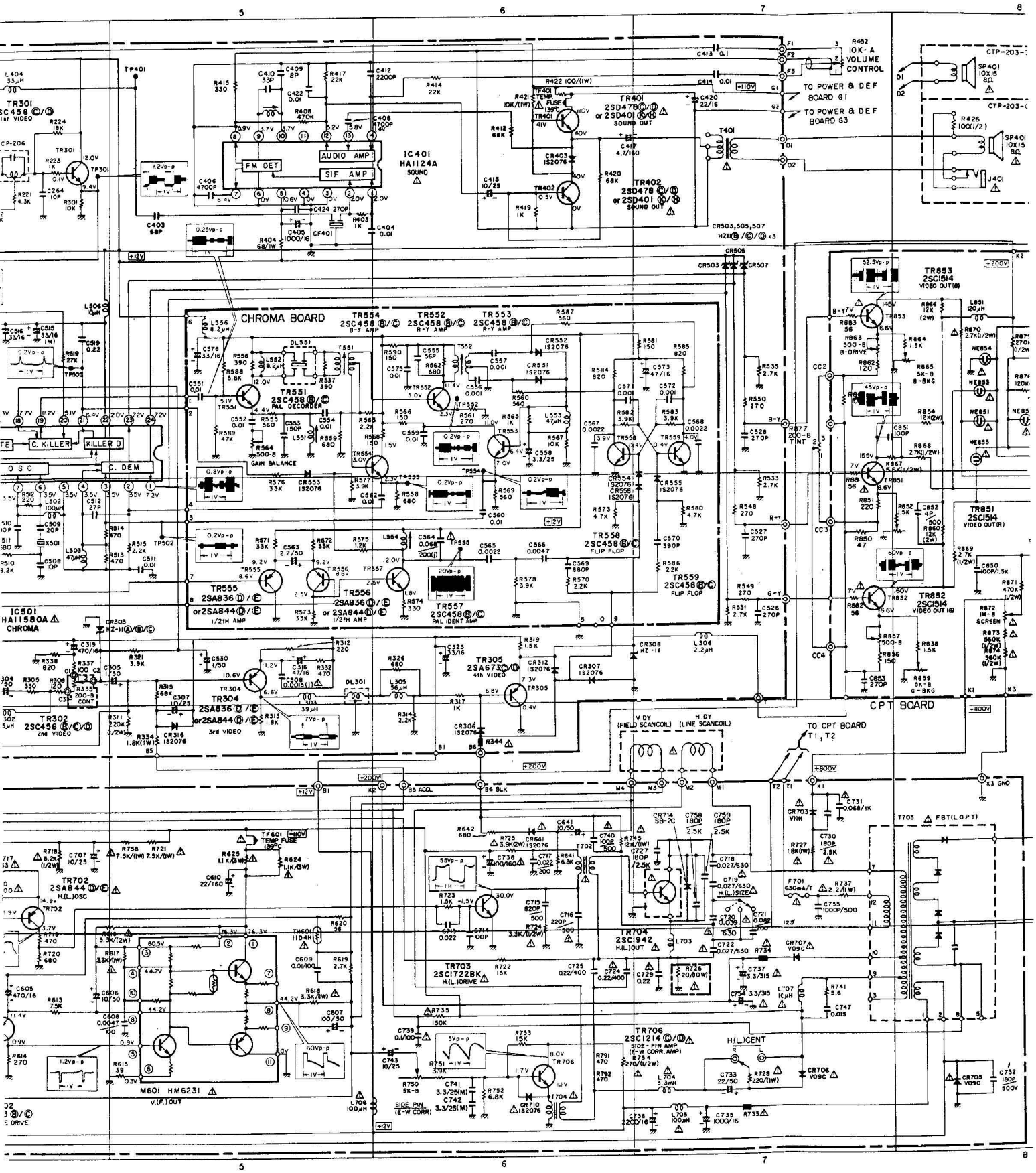

TUNER BOARD
HP-538
SIGNAL CHASSIS BOARD
POWER & DEF BOARD
FILTER BOARD
TR201 2SC1855 1st PIF
TR202 2SC1855 2nd PIF
TR203 2SC717 3rd PIF
TR251 2SC458 NOISE CANCELER
TR252 2SA673 SYNC SEP
TR253 2SA836 or 2SA844 AGC DET
TR254 2SC458 AGC AMP
TR701 2SC458 H (L) AFC
TR901 2SC458 MULTI VIBRATOR
TR902 2SC458 MULTI VIBRATOR
TR903 2SC458 PHASE INVERTER
TR904 2SA673 POWER PRE DRIVE
TR905 2SC1728K POWER DRIVE
TR906 2SC1942 POWER OUT
TR907 2SC458 ERROR AMP
TR908 2SC458 HV LIMIT
TR909 2SA673 HV LIMIT
TR306 2SC458 PEDESTAL CLAMPER
VOLTAGE DIVIDER
REFERENCE VOLTAGE
TO SIGNAL BOARD G1
TO SIGNAL BOARD G3
MAINS SWITCH S901
AC200-240V 50Hz
+12V
+14V

BASIC CIRCUIT SCHEMATIC DIAGRAM (CTP-203)


AFC SW
TR201 2SC1855 1st PIF
TR202 2SC1855 2nd PIF
TR203 2SC717 3rd PIF
DET
DC AMP
IF AMP
TR301 2SC458 ©/Ⓓ 1st VIDEO
FM DET
AUDIO AMP
SIF AMP
CHROMA BOARD
TR554 2SC458 Ⓑ/© B-Y AMP
TR551 2SC458 Ⓑ/© PAL DECORDER
GAIN BALANCE
ACC
GATE
C. KILLER
KILLER D
APC D.
OSC
C. DEM
IC501 HA11580A CHROMA
TR253 2SA836 or 2SA844 Ⓓ/Ⓔ AGC. DET
TR254 2SC458 Ⓑ/© AGC. AMP
TR251 2SC458 Ⓔ/© NOISE CANCELER
TR252 2SA673 Ⓑ/©/Ⓓ SYNC SEP
TR306 2SC458 Ⓑ/©/Ⓓ PEDESTAL CLAMPER
TR302 2SC458 Ⓑ/©/Ⓓ 2nd VIDEO
TR304 2SA836 Ⓓ/Ⓔ or 2SA844 Ⓓ/Ⓔ 3rd VIDEO
TR555 2SA836 Ⓓ/Ⓔ or 2SA844 Ⓓ/Ⓔ 1/2fH AMP
TR556 2SA836 Ⓓ/Ⓔ or 2SA844 Ⓓ/Ⓔ 1/2fH AMP
TO SIGNAL BOARD G1
TO SIGNAL BOARD G3
TR906 2SC1942 POWER OUT
CP901 HM9102
VOLTAGE DIVIDER
REFERENCE VOLTAGE
CP902 HM9102
TR909 2SA673 Ⓑ/© HV LIMIT
B2 SYNC
B3 GND
FILTER BOARD
MAINS SWITCH S901
AC200~240V 50Hz
TR701 2SC458 Ⓑ/© H.(L.) AFC
TR702 2SA844 Ⓓ/Ⓔ H.(L.)OSC
TF601 TEMP FUSE 139°C
TR601 2SC458 Ⓑ/© V.(F.)OSC
TR602 2SA673 Ⓑ/© V.(F.)PRE DRIVE
M601 HM6231 V.(F.)OUT

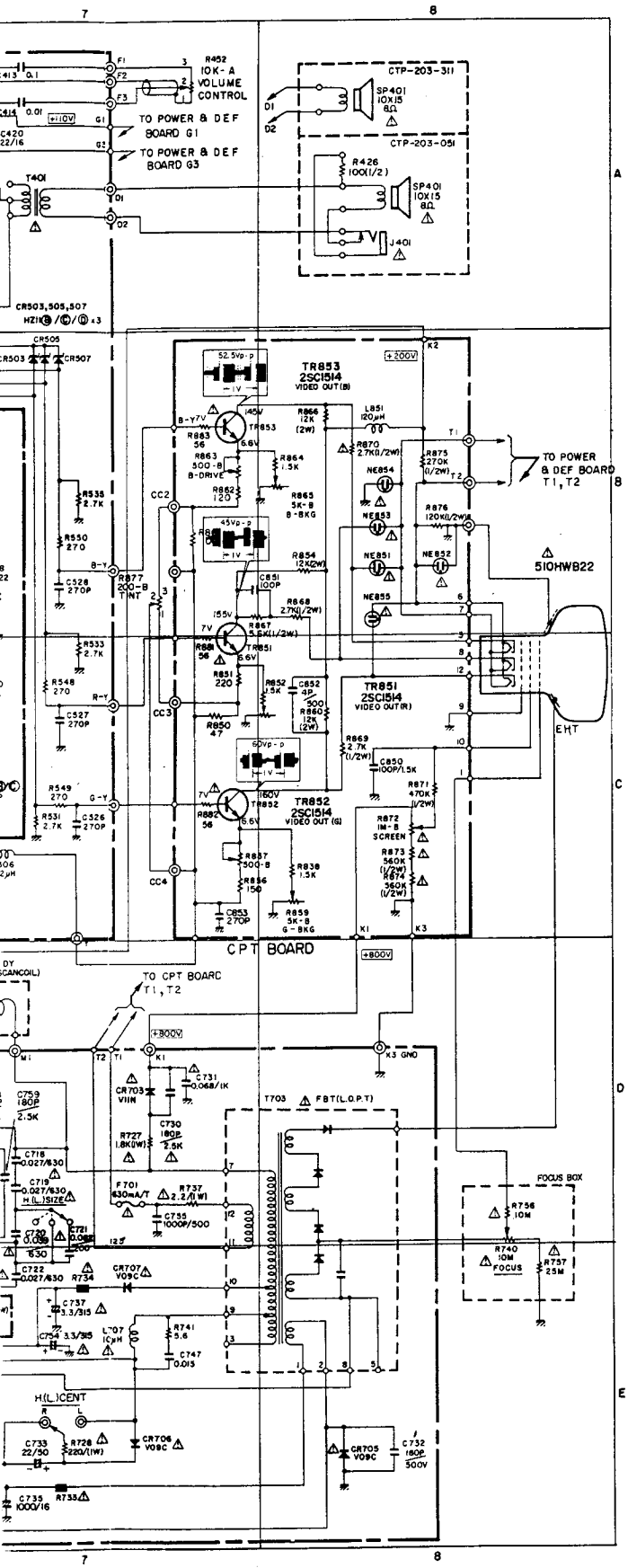
CHEMATIC DIAGRAM (CTP-203)

Components marked with a ⚠ components, read carefully the improper servicing.



PRODUCT SAFETY NOTE

Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the "Product safety notices" of this service manual. Don't degrade the safety of the receiver through improper servicing.



IMPORTANT

The component shaded in red is sealed at the factory. No attempt shall be made to adjust or defeat T701. Refer to Page 5 in Service Manual when it if necessary to adjust the sealed component during servicing.

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100KΩ/V).
  Voltages taken on a complex colour bar signal including a standard colour bar signal.

REPLACEMENT PARTS LIST

CAPACITORS

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
A2	C002	0248632	Ceramic	2pF ±0.25pF	DC50WV
A2	C003	0244101	Ceramic	1.000pF ±10%	DC50WV
A2	C005	0248684	Ceramic	100pF ±5%	DC50WV
A2	C007	0249043	Ceramic	100pF ±5%	DC50WV
A2	C012	0244101	Ceramic	1.000pF ±10%	DC50WV
A2	C013	0249043	Ceramic	100pF ±5%	DC50WV
A2	C014	0248668	Ceramic	22pF ±5%	DC50WV
A2	C015	0244101	Ceramic	1.000pF ±10%	DC50WV
A1	C058	0252613	Electrolytic	3.3μF	DC25WV
A1	C059	0277013	Polyester film	0.01μF ±10%	DC50WV
A1	C060	0252613	Electrolytic	3.3μF	DC25WV
A1	C091	0244105	Ceramic	0.0022μF±10%	DC50WV
A1	C092	0252613	Electrolytic	3.3μF	DC25WV
B1	C201	0244101	Ceramic	1.000pF ±10%	DC50WV
B1	C210	0252817	Electrolytic	2.2μF	DC50WV
B2	C213	0248684	Ceramic	100pF ±5%	DC50WV
B2	C214	0244141	Ceramic	0.01μF ±10%	DC50WV
B2	C215	0244101	Ceramic	1.000pF ±10%	DC50WV
B2	C216	0244101	Ceramic	1.000pF ±10%	DC50WV
B2	C217	0244141	Ceramic	0.01μF ±10%	DC50WV
B2	C218	0244101	Ceramic	1.000pF ±10%	DC50WV
B3	C219	0244101	Ceramic	1.000pF ±10%	DC50WV
B3	C220	0244141	Ceramic	0.01μF ±10%	DC50WV
A3	C221	0246413	Ceramic	3pF ±0.25pF	DC50WV
B3	C223	0248690	Ceramic	180pF ±5%	DC50WV
A3	C225	0249043	Ceramic	100pF ±5%	DC50WV
A3	C226	0248340	Ceramic	27pF ±5%	DC50WV
A3	C227	0244101	Ceramic	1.000pF ±10%	DC50WV
A4	C228	0248650	Ceramic	10pF±0.5%	DC50WV
A4	C229	0248650	Ceramic	10pF±0.5p	DC50WV
B1	C232	0277013	Polyester	0.01μF ±10%	DC50WV
A3	C233	0248637	Ceramic	7pF ±0.25pF	DC50WV
A3	C235	0248034	Ceramic	15pF ±5%	DC50WV
B3	C251	0277025	Polyester	0.1μF ±10%	DC50WV
C3	C252	0252523	Electrolytic	33μF	DC16WV
B2	C253	0252525	Electrolytic	47μF	DC16WV
B2	C254	0252811	Electrolytic	1μF	DC500WV
C2	C255	0244117	Ceramic	680pF ±10%	DC50WV
C2	C256	0251087	Electrolytic	1μF	DC25WV
C1	C257	0252615	Electrolytic	4.7μF	DC25WV
B1	C258	0252522	Electrolytic	22μF	DC16WV
B1	C260	0252817	Electrolytic	2.2μF	DC50WV
B1	C261	0252525	Electrolytic	47μF	DC16WV
C3	C264	0248650	Ceramic	10pF±0.5pF	DC50WV
A4	C263	0277005	Ceramic	2.200pF ±10%	DC50WV
B3	C266	0248690	Ceramic	180pF ±5%	DC50WV
B1	C282	0244101	Ceramic	1.000pF ±10%	DC50WV
D4	C302	0244101	Ceramic	1.000pF ±10%	DC50WV
C4	C303	0248676	Ceramic	47pF ±5%	DC50WV
C4	C304	0252811	Electrolytic	1μF	DC50WV
C4	C305	0252811	Electrolytic	1μF	DC50WV
C4	C307	0252621	Electrolytic	10μF	DC25WV
⚠ C5	C308	0275023	Polyester	1.500pF ±5%	DC50WV
C3	C311	0248696	Ceramic	330pF ±5%	DC50WV
C3	C312	0252621	Electrolytic	10μF	DC25WV
C4	C316	0252525	Electrolytic	47μF	DC16WV
C6	C318	0244101	Ceramic	1.000pF ±10%	DC50WV
C4	C319	0252565	Electrolytic	470μF	DC16WV
C6	C323	0252523	Electrolytic	33μF	DC16WV
A3	C401	0248632	Ceramic	2pF ±0.25pF	DC25WV
A3	C402	0248650	Ceramic	10pF±0.5pF	DC50WV
A5	C403	0248680	Ceramic	68pF ±5%	DC50WV
A5	C404	0244171	Ceramic	0.01μF ±5%	DC50WV
A5	C405	0252536	Electrolytic	1.000μF	DC16WV
A5	C406	0244109	Ceramic	4.700pF ±10%	DC50WV
A5	C408	0244109	Ceramic	4.700pF ±10%	DC50WV
A5	C409	0246418	Ceramic	8pF ±0.25pF	DC50WV
A5	C410	0248182	Ceramic	33pF ±5%	DC50WV
A5	C412	0244105	Polyester	2.200pF ±5%	DC50WV
A7	C413	0277025	Polyester	0.1μF ±10%	DC50WV
A7	C414	0277013	Polyester	0.01μF ±10%	DC50WV
A6	C415	0252821	Electrolytic	10μF	DC25WV
A6	C417	0257537	Electrolytic	4.7μF	DC160WV
A7	C420	0258585	Electrolytic	22μF	DC160WV
A5	C422	0277013	Polyester	0.01μF ±10%	DC50WV
A5	C424	0244136	Ceramic	270pF ±10%	DC50WV
B3	C501	0248682	Ceramic	82pF ±5%	DC50WV
B3	C503	0248680	Ceramic	68pF ±5%	DC50WV
B3	C504	0248686	Ceramic	120pF ±5%	DC50WV
B3	C505	0244171	Ceramic	0.01μF ±5%	DC50WV
B4	C506	0244171	Ceramic	0.01μF ±5%	DC50WV
C3	C507	0248698	Ceramic	560pF ±5%	DC50WV
C4	C508	0248650	Ceramic	10pF±0.5pF	DC50WV
C4	C509	0246447	Ceramic	20pF ±5%	DC50WV
C4	C510	0249094	Ceramic	180pF ±5%	DC50WV
C4	C511	0244171	Ceramic	0.01μF ±5%	DC50WV
C4	C512	0248670	Ceramic	27pF ±5%	DC50WV
B4	C515	0259808	Electrolytic	33μF	DC16WV
B4	C516	0252523	Electrolytic	33μF	DC16WV
B4	C517	0252811	Electrolytic	1μF	DC50WV
C3	C518	0252811	Electrolytic	1μF	DC50WV
B4	C519	0277029	Polyester	0.22μF ±10%	DC50WV
B3	C520	0248672	Ceramic	33pF ±5%	DC50WV
C4	C521	0244171	Ceramic	0.01μF ±5%	DC50WV
C3	C522	0248670	Ceramic	27pF ±5%	DC50WV
C4	C523	0277021	Polyester	0.047μF ±10%	DC50WV
C4	C524	0252817	Electrolytic	2.2μF	DC50WV
C4	C525	0277021	Polyester	0.047μF ±10%	DC50WV
C7	C526	0244136	Ceramic	270pF ±10%	DC50WV
B7	C527	0244136	Ceramic	270pF ±10%	DC50WV
B7	C528	0244136	Ceramic	270pF ±10%	DC50WV
C3	C529	0244117	Ceramic	680pF ±10%	DC50WV
C5	C530	0252811	Electrolytic	1μF	DC50WV
B5	C551	0244171	Ceramic	0.01μF ±5%	DC50WV
B5	C552	0244171	Ceramic	0.01μF ±5%	DC50WV
B5	C553	0248688	Ceramic	150pF ±5%	DC50WV
B5	C554	0244171	Ceramic	0.01μF ±5%	DC50WV
B6	C555	0248678	Ceramic	56pF ±5%	DC50WV
B6	C556	0244101	Ceramic	1.000pF ±10%	DC50WV
B6	C557	0244101	Ceramic	1.000pF ±10%	DC50WV
B6	C558	0252613	Electrolytic	3.3μF	DC25WV
B6	C559	0244171	Ceramic	0.01μF ±5%	DC50WV
C6	C560	0244171	Ceramic	0.01μF ±5%	DC50WV
B5	C561	0244171	Ceramic	0.01μF ±5%	DC50WV
C5	C562	0244171	Ceramic	0.01μF ±5%	DC50WV
C5	C563	0252817	Electrolytic	2.2μF	DC50WV
⚠ C6	C564	0299959	Polypropylene	0.068μF ±5%	DC200WV

PRODUCT SAFETY NOTE — Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
C6	C565	0244105	Ceramic	2.200pF ±10%	DC50WV
C6	C566	0244109	Ceramic	4.700pF ±10%	DC50WV
B6	C567	0244105	Ceramic	2.200pF ±10%	DC50WV
B7	C568	0244105	Ceramic	2.200pF ±10%	DC50WV
C6	C569	0244117	Ceramic	680pF ±10%	DC50WV
C6	C570	0244119	Ceramic	390pF ±10%	DC50WV
B6	C571	0244101	Ceramic	1.000pF ±10%	DC50WV
B6	C572	0244101	Ceramic	1.000pF ±10%	DC50WV
B6	C573	0252525	Electrolytic	47μF	DC16WV
B5	C575	0244171	Ceramic	0.01μF ±5%	DC50WV
B5	C576	0252523	Electrolytic	33μF	DC16WV
E3	C601	0277023	Polyester	0.068μF ±10%	DC50WV
E3	C602	0251087	Electrolytic	1μF	DC25WV
⚠ E3	C603	0292708	Tantal	10μF ±10%	DC16WV
E3	C604	0252536	Electrolytic	1.000μF	DC16WV
E4	C605	0252565	Electrolytic	470μF	DC16WV
E4	C606	0252821	Electrolytic	10μF	DC50WV
E5	C607	0252861	Electrolytic	100μF	DC50WV
E4	C608	0275815	Polyester	0.0047pF±10%	DC100WV
E5	C609	0275817	Polyester	0.01μF ±10%	DC100WV
D5	C610	0258585	Electrolytic	22μF	DC160WV
E3	C611	0279859	Polyester	0.1μF ±10%	DC100WV
D6	C641	0252821	Electrolytic	10μF	DC50WV
D2	C701	0277013	Polyester	0.01μF ±10%	DC50WV
D3	C702	0277013	Polyester	0.01μF ±10%	DC50WV
D3	C703	0277013	Polyester	0.01μF ±10%	DC50WV
D3	C704	0277017	Polyester	0.022μF ±10%	DC50WV
D3	C705	0243504	Ceramic	180pF	DC500WV
D3	C706	0277017	Polyester	0.022μF ±10%	DC50WV
D4	C707	0252621	Electrolytic	10μF	DC25WV
D3	C708	0252613	Electrolytic	3.3μF	DC25WV
⚠ D4	C709	0299963	Polypropylene	0.01μF ±5%	DC630WV
⚠ D4	C710	0299961	Polypropylene	0.1μF	DC200WV
D4	C711	0277005	Polyester	0.0022μF±10%	DC50WV
D4	C712	0277003	Polyester	0.0015μF±10%	DC50WV
D6	C713	0277017	Polyester	0.022μF ±10%	DC50WV
D6	C714	2048684	Ceramic	100pF ±5%	DC50WV
⚠ D6	C715	0243512	Ceramic	820pF ±10%	DC500WV
⚠ D6	C716	0243505	Ceramic	220pF ±10%	DC500WV
D6	C717	0299918	Polypropylene	0.022μF ±5%	DC200WV
⚠ D7	C718	0299631	Polypropylene	0.027μF ±10%	DC200WV
⚠ D7	C719	0299630	Polypropylene	0.022μF ±10%	DC630WV
⚠ D7	C720	0299633	Polypropylene	0.039μF ±10%	DC200WV
⚠ D7	C721	0299922	Polypropylene	0.047μF ±10%	DC200WV
⚠ E7	C722	0299631	Polypropylene	0.027μF ±10%	DC200WV
⚠ E6	C724	0299607	Polypropylene	0.22μF ±10%	DC400WV
E6	C725	0299607	Polypropylene	0.22μF ±10%	DC400WV
D7	C729	0277029	Polyester	0.22μF ±10%	DC100WV
D7	C730	0243839	Ceramic	180pF ±10%	DC2.5kWV
D7	C731	0215246	Paper	0.068μF ±20%	DC1kWV
D7	C727	0243839	Ceramic	180pF ±10%	DC2.5kWV
E8	C732	0243504	Ceramic	180pF ±10%	DC500WV
E7	C733	0252822	Electrolytic	22μF	DC50WV
E7	C735	0252536	Electrolytic	1.000μF	DC16WV
E6	C736	0252537	Electrolytic	2200μF	DC16WV
⚠ E7	C737	0257543	Electrolytic	3.3μF	DC315WV
⚠ D6	C738	0258589	Electrolytic	100μF	DC160WV
⚠ E6	C739	0279859	Polyester	0.1μF ±10%	DC100WV
D6	C740	0243425	Ceramic	100pF	DC500WV
E6	C741	0251101	Electrolytic	3.3μF	DC25WV
E5	C743	0252621	Electrolytic	10μF	DC25WV
E3	C744	0252811	Electrolytic	1μF	DC50WV
E7	C747	0277015	Ceramic	0.015μF	DC50WV
⚠ E2	C753	0257537	Electrolytic	4.7μF	DC160WV
⚠ E7	C754	0257543	Electrolytic	3.3μF	DC315WV
D6	C755	0244501	Ceramic	1.000pF ±10%	DC500WV
D6	C756	0244109	Ceramic	0.0047μF	DC50WV
E7	C757	0243504	Ceramic	180pF	DC500WV
C8	C850	0243425	Ceramic	100pF ±10%	DC1.6kWV
D7	C758	0243839	Ceramic	180pF ±10%	DC2.5kWV
D7	C759	0243839	Ceramic	180pF ±10%	DC2.5kWV
B7	C851	0248724	Ceramic	100pF ±10%	DC50WV
C8	C852	0247804	Ceramic	4pF ±0.25pF	DC500WV
C7	C853	0244136	Ceramic	270pF	DC50WV
⚠ A2	C900	0214479	Paper	0.068μF	DC450WV
⚠ A2	C901	0214480	Paper	0.1μF	DC450WV
⚠ A1	C902	0219425	Polyester	0.1μF ±20%	DC630WV
⚠ A2	C903	0299920	Polypropylene	0.033μF ±10%	DC200WV
E1	C905	0249115	Ceramic	4.700pF ±10%	DC500WV
E1	C906	0249115	Ceramic	4.700pF ±10%	DC500WV
E1	C907	0249115	Ceramic	4.700pF ±10%	DC500WV
E1	C908	0249115	Ceramic	4.700pF ±10%	DC500WV
⚠ E1	C909	0259843	Electrolytic	220μF	DC400WV
⚠ D1	C910	0258592	Electrolytic	4.7μF	DC400WV
D1	C911	0277001	Polyester	1.000pF ±10%	DC50WV
D1	C912	0277001	Polyester	1.000pF ±10%	DC50WV
D1	C913	0277021	Polyester	0.047μF ±10%	DC50WV
E1	C914	0252613	Electrolytic	3.3μF	DC25WV
E1	C915	0277019	Polyester	0.033μF ±10%	DC50WV
C1	C916	0252613	Polyester	3.3μF	DC25WV
D1	C917	0277011	Polyester	6.800pF ±10%	DC50WV
C1	C919	0251101	Electrolytic	3.3μF	DC25WV
D1	C920	0277021	Polyester	0.047μF ±10%	DC50WV
D2	C921	0243507	Ceramic	330pF ±10%	DC500WV
C1	C922	0299912	Polyester	6.800pF ±10%	DC200WV
C2	C925	0259844	Electrolytic	220μF	DC160WV
⚠ C2	C930	0243837	Ceramic	330pF ±10%	DC2.5kWV
C2	C931	0243837	Ceramic	330pF ±10%	DC2.5kWV
⚠ D1	C932	0252331	Electrolytic	100μF	DC10WV
⚠ C2	C933	0243837	Ceramic	330pF ±10%	DC2.5kWV

RESISTORS

A2	R002	0114133	Carbon film	120Ω	SRD¼P
A2	R003	0114175	Carbon film	3.9KΩ	SRD¼P
A2	R004	0114203	Carbon film	12KΩ	SRD¼P
A2	R005	0114175	Carbon film	3.9KΩ	SRD¼P
A1	R089	0179533	Composition	1.5MΩ ±5%	¼PCL
A1	R090	0114131	Carbon film	100Ω ±5%	SRD¼P
A1	R094	0151257	Control	50KΩ-B	RV-10
A1	R095	0179532	Composition	470KΩ ±5%	¼PCL
A1	R096	0114221	Carbon film	68KΩ ±5%	SRD¼P
A1	R097	0134218	Composition	4.7MΩ ±5%	RC½GF
A1	R098	0114205	Carbon film	15KΩ ±5%	SRD¼P
A1	R099	0114209	Carbon film	22KΩ ±5%	SRD¼P
B1	R201	0114062	Carbon film	75Ω	SRD¼P
B1	R202	0114049	Carbon film	22Ω	SRD¼P
B2	R203	0114012	Carbon film	6.2Ω	SRD¼P
B1	R205	0114149	Carbon film	560Ω	SRD¼P

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
B2	R206	0114138	Carbon film	200Ω	SRD¼P
B2	R207	0114171	Carbon film	2.7KΩ	SRD¼P
B2	R208	0114131	Carbon film	100Ω	SRD¼P
B2	R209	0114149	Carbon film	560Ω	SRD¼P
B2	R210	0114139	Carbon film	220Ω	SRD¼P
B2	R211	0114171	Carbon film	2.7KΩ	SRD¼P
B2	R212	0114131	Carbon film	100Ω	SRD¼P
B3	R213	0114171	Carbon film	2.7KΩ	SRD¼P
B3	R214	0114151	Carbon film	680Ω	SRD¼P
B3	R215	0114137	Carbon film	180Ω	SRD¼P
A3	R216	0114057	Carbon film	47Ω	SRD¼P
A3	R217	0114057	Carbon film	47Ω	SRD¼P
A3	R218	0114161	Carbon film	1KΩ	SRD¼P
B2	R219	0114147	Carbon film	470Ω	SRD¼P
A4	R220	0114141	Carbon film	270Ω	SRD¼P
A4	R221	0114176	Carbon film	4.3KΩ	SRD¼P
A4	R222	0114183	Carbon film	8.2KΩ	SRD¼P
A4	R223	0114161	Carbon film	1KΩ	SRD¼P
A4	R224	0114207	Carbon film	18KΩ	SRD¼P
B3	R225	0114063	Carbon film	82Ω	SRD¼SD
B2	R226	0137507	Carbon film	3.9Ω	SRD¼SD
B3	R251	0114217	Carbon film	47KΩ	SRD¼P
B2	R252	0114209	Carbon film	22KΩ	SRD¼P
B2	R253	0114169	Carbon film	2.2KΩ	SRD¼P
B2	R254	0114203	Carbon film	12KΩ	SRD¼P
C2	R255	0114133	Carbon film	120Ω	SRD¼P
B2	R256	0114137	Carbon film	180Ω	SRD¼P
C3	R257	0114205	Carbon film	15KΩ	SRD¼P
C3	R258	0114179	Carbon film	5.6KΩ	SRD¼P
B2	R259	0114137	Carbon film	180Ω	SRD¼P
B2	R260	0114153	Carbon film	820Ω	SRD¼P
C2	R261	0114175	Carbon film	3.9KΩ	SRD¼P
C2	R262	0114161	Carbon film	1KΩ	SRD¼P
B1	R263	0114179	Carbon film	5.6KΩ	SRD¼P
B1	R264	0114177	Carbon film	4.7KΩ	SRD¼P
B1	R265	0151187	Control	5KΩ-A	A. G. C
B1	R266	0115167	Carbon film	1.8KΩ	SRD¼P
B1	R267	0114153	Carbon film	820Ω	SRD¼P
D3	R274	0114145	Carbon film	390Ω	SRD¼P
B2	R275	0114149	Carbon film	560Ω	SRD¼P
B1	R276	0114237	Carbon film	180Ω	SRD¼P
B1	R277	0114169	Carbon film	2.2KΩ	SRD¼P
B1	R280	0114177	Carbon film	4.7KΩ	SRD¼P
B1	R282	0114211	Carbon film	27KΩ	SRD¼P
A4	R301	0114201	Carbon film	10KΩ	SRD¼P
C3	R302	0114145	Carbon film	390Ω	SRD¼P
C4	R305	0114143	Carbon film	330Ω	SRD¼P
C4	R306	0114141	Carbon film	270Ω	SRD¼P
C4	R308	0114133	Carbon film	120Ω	SRD¼P
D4	R311	0134169	Composition	220KΩ	RC½GF
C5	R312	0114139	Carbon film	220Ω	SRD¼P
D5	R313	0114167	Carbon film	1.8KΩ	SRD¼P
D6	R314	0114169	Carbon film	2.2KΩ	SRD¼P
D4	R315	0114221	Carbon film	68KΩ	SRD¼P
C6	R317	0114161	Carbon film	1KΩ	SRD¼P
C6	R319	0114165	Carbon film	1.5KΩ	SRD¼P
C4	R321	0114175	Carbon film	3.9KΩ	SRD¼P
D3	R322	0114217	Carbon film	47KΩ	SRD¼P
C3	R323	0114293	Carbon film	330KΩ	SRD¼P
C3	R324	0114149	Carbon film	560Ω	SRD¼P

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
C3	R325	0114177	Carbon film	4.7KΩ	SRD¼P
C5	R326	0114151	Carbon film	680Ω	SRD¼P
C3	R327	0151335	Control	500Ω-B	SUB. BRIGHT
D3	R328	0166675	Control	500Ω-B	BRIGHT
C5	R332	0114147	Carbon film	470Ω	SRD¼P
⚠ D4	R334	0110175	Carbon film	18KΩ	
C4	R335	0166674	Control	200Ω-B	CONT
C4	R337	0114131	Carbon film	68Ω	SRD¼P
C4	R338	0114153	Carbon film	820Ω	SRD¼P
D6	R344	0119508	Fuse resistor	56Ω	RN¼
C4	R346	0137571	Carbon film	680Ω	SRD¼P
A4	R401	0114201	Carbon film	10KΩ	SRD¼P
A4	R402	0134169	Composition	220KΩ	RC½GF
A5	R403	0114161	Carbon film	1KΩ	SRD¼P
A5	R404	0110117	Metal oxide	68Ω	RD1PB
A5	R408	0114297	Carbon film	470KΩ	SRD¼P
A6	R412	0114221	Carbon film	68KΩ	SRD¼P
A5	R413	0114171	Carbon film	2.7KΩ	SRD¼P
A6	R414	0137659	Carbon film	22KΩ	SRD¼P
A5	R415	0114143	Carbon film	330Ω	SRD¼P
A5	R417	0114169	Carbon film	2.2KΩ	SRD¼P
A6	R419	0114161	Carbon film	1KΩ	SRD¼P
A6	R420	0114221	Carbon film	68KΩ	SRD¼P
A6	R421	0110169	Metal oxide	10KΩ	RD1PB
A6	R422	0110121	Metal oxide	100Ω	
A7	R452	0116673	Control	10KΩ-A	VOLUME
B3	R501	0114153	Carbon film	820Ω	SRD¼P
B3	R508	0114297	Carbon film	470KΩ	SRD¼P
B3	R509	0114175	Carbon film	3.9KΩ	SRD¼P
C4	R510	0114183	Carbon film	8.2KΩ	SRD¼P
C4	R511	0114151	Carbon film	680Ω	SRD¼P
C4	R512	0114139	Carbon film	220Ω	SRD¼P
C4	R513	0114147	Carbon film	470Ω	SRD¼P
C4	R514	0137567	Carbon film	470Ω	SRD¼P
C4	R515	0114169	Carbon film	2.2KΩ	SRD¼P
B4	R518	0114213	Carbon film	33KΩ	SRD¼P
B4	R519	0114211	Carbon film	27KΩ	SRD¼P
C3	R520	0014179	Carbon film	5.6KΩ	SRD¼P
C3	R521	0114211	Carbon film	27KΩ	SRD¼P
C4	R524	0114211	Carbon film	27KΩ	SRD¼P
C4	R525	0151296	Control	5KΩ-B	PHASE CENT.
C4	R526	0114211	Carbon film	27KΩ	SRD¼P
C4	R529	0114169	Carbon film	2.2KΩ	SRD¼P
C7	R531	0114171	Carbon film	2.7KΩ	SRD¼P
C7	R533	0114171	Carbon film	2.7KΩ	SRD¼P
B7	R535	0114171	Carbon film	2.7KΩ	SRD¼P
C3	R543	0114149	Carbon film	560Ω	SRD¼P
C3	R544	0151185	Control	1KΩ-B	PHASE
C3	R545	0166676	Control	2KΩ-B	COLOUR
C7	R548	0114141	Carbon film	270Ω	SRD¼P
C7	R549	0114141	Carbon film	270Ω	SRD¼P
B7	R550	0114141	Carbon film	270Ω	SRD¼P
B5	R555	0114149	Carbon film	560Ω	SRD¼P
B5	R556	0114145	Carbon film	390Ω	SRD¼P
B5	R557	0114145	Carbon film	390Ω	SRD¼P
B5	R558	0114151	Carbon film	680Ω	SRD¼P
B5	R559	0114151	Carbon film	680Ω	SRD¼P
B6	R560	0114149	Carbon film	560Ω	SRD¼P
B6	R561	0114141	Carbon film	270Ω	SRD¼P
B5	R562	0114151	Carbon film	680Ω	SRD¼P
B5	R563	0114169	Carbon film	2.2KΩ	SRD¼P
B5	R564	0151186	Control	500Ω-B	GAIN BALANCE

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PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
B6	R565	0114161	Carbon film	1KΩ	SRD¼P
B5	R566	0114135	Carbon film	150Ω	SRD¼P
B6	R567	0114201	Carbon film	10KΩ	SRD¼P
B5	R568	0114135	Carbon film	150Ω	SRD¼P
C6	R569	0114149	Carbon film	560Ω	SRD¼P
C6	R570	0114169	Carbon film	2.2KΩ	SRD¼P
C5	R571	0114213	Carbon film	33KΩ	SRD¼P
C5	R572	0114213	Carbon film	33KΩ	SRD¼P
C5	R573	0114213	Carbon film	33KΩ	SRD¼P
C5	R574	0114143	Carbon film	330Ω	SRD¼P
C5	R575	0114163	Carbon film	1.2KΩ	SRD¼P
B5	R576	0114213	Carbon film	33KΩ	SRD¼P
C5	R577	0114175	Carbon film	3.9KΩ	SRD¼P
C6	R578	0114175	Carbon film	3.9KΩ	SRD¼P
B5	R579	0114177	Carbon film	4.7KΩ	SRD¼P
C7	R580	0114177	Carbon film	4.7KΩ	SRD¼P
B6	R581	0114135	Carbon film	150Ω	SRD¼P
B6	R582	0114175	Carbon film	3.9KΩ	SRD¼P
B6	R583	0114175	Carbon film	3.9KΩ	SRD¼P
B7	R584	0114153	Carbon film	820Ω	SRD¼P
B7	R585	0114153	Carbon film	820Ω	SRD¼P
C6	R586	0114169	Carbon film	2.2KΩ	SRD¼P
B6	R587	0114149	Carbon film	560Ω	SRD¼P
B5	R588	0114181	Carbon film	6.8KΩ	SRD¼P
B5	R589	0114177	Carbon film	4.7KΩ	SRD¼P
B5	R590	0114135	Carbon film	150Ω	SRD¼P
E3	R601	0137621	Carbon film	6.8KΩ	RC¼GF
E3	R602	0114201	Carbon film	10KΩ	SRD¼P
E3	R603	0114171	Carbon film	2.7KΩ	SRD¼P
E3	R604	0137623	Carbon film	8.2KΩ	RC¼GF
E3	R605	0151331	Control	20KΩ-B	V.HOLD
⚠ E3	R606	0114201	Carbon film	10KΩ	SRD¼P
E4	R607	0151338	Control	5KΩ-B	V.SIZE
E4	R608	0114201	Carbon film	10KΩ	SRD¼P
E4	R609	0151329	Control	50KΩ-B	V.LIN.
E4	R610	0114177	Carbon film	4.7KΩ	SRD¼P
E4	R611	0114217	Carbon film	47KΩ	SRD¼P
⚠ E4	R612	0114007	Carbon film	3.9Ω	SRD¼P
E4	R613	0114182	Carbon film	7.5KΩ	SRD¼P
E4	R614	0114139	Carbon film	270Ω	SRD¼P
E4	R615	0114055	Carbon film	39Ω	SRD¼P
⚠ D4	R616	0114173	Carbon film	3.3KΩ	SRD¼P
⚠ E4	R617	0114173	Carbon film	3.3KΩ	SRD¼P
⚠ E5	R618	0110157	Metal oxide	3.3KΩ	RD1PB
E5	R619	0114171	Carbon film	2.7KΩ	SRD¼P
D5	R620	0114059	Carbon film	56Ω	SRD¼P
⚠ E3	R621	0110141	Metal oxide	680Ω	RD1PB
⚠ E3	R622	0162625	Control	500Ω-B	V.CENT
⚠ E3	R623	0119508	Fuse resistor	56Ω	RN¼
⚠ D5	R624	0110346	Metal oxide	1.1KΩ	RD3PB
⚠ D5	R625	0110346	Metal oxide	1.1KΩ	RD3PB
D6	R641	0114181	Carbon film	6.8KΩ	SRD¼P
D6	R642	0114151	Carbon film	680Ω	SRD¼P
D2	R701	0114205	Carbon film	15KΩ	SRD¼P
D2	R702	0114165	Carbon film	1.5KΩ	SRD¼P
D3	R703	0114147	Carbon film	470Ω	SRD¼P
D2	R704	0114147	Carbon film	470Ω	SRD¼P
D3	R706	0114203	Carbon film	12KΩ	SRD¼P
D3	R707	0114203	Carbon film	12KΩ	SRD¼P
D3	R708	0114177	Carbon film	4.7KΩ	SRD¼P
D3	R709	0114183	Carbon film	8.2KΩ	SRD¼P
D3	R711	0114151	Carbon film	680Ω	SRD¼P
⚠ E4	R713	0151345	Control	20KΩ-B	SUB H.HOLD
D4	R714	0114205	Carbon film	15KΩ	SRD¼P
D4	R715	0114179	Carbon film	5.6KΩ	SRD¼P
⚠ D4	R716	0114217	Carbon film	47KΩ	SRD¼P
⚠ D4	R717	0114053	Carbon film	33Ω	SRD¼P
D4	R718	0134103	Composition	8.2KΩ	RC½GF
E4	R719	0114147	Carbon film	470Ω	SRD¼P
E4	R720	0114151	Carbon film	680Ω	SRD¼P
⚠ D4	R721	0110166	Metal oxide	7.5KΩ	RD1PB
E6	R722	0114205	Carbon film	15KΩ	SRD¼P
D6	R723	0114165	Carbon film	1.5KΩ	SRD¼P
⚠ D6	R724	0134093	Composition	3.3KΩ	RC½GF
⚠ D6	R725	0110259	Metal oxide	3.9KΩ	RD2PB
⚠ E7	R726	0142265	Wire wound	20Ω	RWH-10
⚠ D7	R727	0110151	Metal oxide	1.8KΩ	RD1PB
⚠ E7	R728	0110129	Metal oxide	220Ω	RD1PB
⚠ E7	R733	0119502	Fuse resistor	1Ω	RN¼
⚠ E7	R734	0119505	Fuse resistor	2.2Ω	RN¼
⚠ E6	R735	0114283	Carbon film	120KΩ	SRD¼P
⚠ D7	R737	0190175	Wire wound	2.2Ω ±10%	RD1PB
E7	R741	0114011	Carbon film	5.6Ω	SRD¼P
⚠ D6	R745	0110171	Metal oxide	12KΩ	RD1PB
⚠ D6	R746	0119504	Metal film	0.5Ω	RN¼
E6	R750	0151296	Control	5KΩ-B	
E6	R751	0114175	Carbon film	3.9KΩ	SRD¼P
E6	R752	0114181	Carbon film	6.8KΩ	SRD¼P
E6	R753	0112405	Composition	15Ω	SRD¼P
E6	R754	0134366	Compound	270Ω	RG½GF
⚠ D4	R758	0110169	Metal oxide	7.5KΩ	RD1PB
⚠ D2	R761	0119505	Fuse resistor	2.2Ω	RN¼
C7	R851	0114139	Carbon film	220Ω	SRD¼P
C7	R852	0114165	Carbon film	1.5KΩ	SRD¼P
C7	R853	0151338	Control	5KΩ-B	
B7	R854	0110271	Metal oxide	12KΩ	RD2PB
C7	R856	0114135	Carbon film	150Ω	SRD¼P
C7	R857	0151335	Control	200Ω-B	
C8	R858	0114165	Carbon film	1.5KΩ	SRD¼P
C8	R859	0151338	Control	5KΩ-B	
C8	R860	0110271	Metal oxide	12KΩ	RD2PB
B7	R861	0114131	Carbon film	100Ω	SRD¼P
B7	R862	0114133	Carbon film	120Ω	SRD¼P
B7	R863	0151335	Control	200Ω-B	
B7	R864	0114165	Carbon film	1.5KΩ	SRD¼P
B7	R865	0151338	Control	5KΩ-B	
B8	R866	0112071	Metal oxide	12KΩ	RD2PB
B7	R867	0134099	Composition	5.6KΩ	RC½GF
B8	R868	0134091	Composition	2.7KΩ	RC½GF
C8	R869	0134091	Composition	2.7KΩ	RC½GF
B8	R870	0134091	Composition	2.7KΩ	RC½GF
C8	R871	0134177	Composition	470KΩ	RC½GF
⚠ C8	R872	0151635	Control	1MΩ-B	SCREEN
⚠ C8	R873	0134179	Composition	560KΩ	RC½GF
⚠ C8	R874	0134179	Composition	560KΩ	RC½GF
B8	R875	0134171	Composition	270KΩ	RC½GF
B8	R876	0134163	Composition	120KΩ	RC½GF
B7	R881	0114059	Carbon film	56Ω	SRD¼P
C7	R882	0114059	Carbon film	56Ω	SRD¼P
B7	R883	0114059	Carbon film	56Ω	SRD¼P
⚠ E1	R901	0142262	Wire wound	10Ω	RD10PB

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PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION		
D1	R902	0114219	Carbon film	56KΩ	SRD¼P
D1	R903	0114165	Carbon film	1.5KΩ	SRD¼P
⚠ D1	R904	0114211	Carbon film	27KΩ	SRD¼P
D1	R905	0114221	Carbon film	68KΩ	SRD¼P
D1	R906	0114165	Carbon film	1.5KΩ	SRD¼P
D1	R907	0114219	Carbon film	56Ω	SRD¼P
⚠ C1	R908	0110275	Metal oxide1	18KΩ	RD3PB
⚠ C1	R909	0110277	Metal oxide	22KΩ	RD3PB
⚠ E2	R910	0110163	Metal oxide	5.6KΩ	RD3PB
C1	R911	0114183	Carbon film	82KΩ	SRD¼P
D1	R912	0114173	Carbon film	3.3KΩ	SRD¼P
C1	R913	0114165	Carbon film	1.5KΩ	SRD¼P
D1	R914	0114173	Carbon film	180Ω	SRD¼P
C1	R915	0114179	Carbon film	5.6KΩ	SRD¼P
D1	R916	0114215	Carbon film	39KΩ	SRD¼P
C1	R918	0110365	Metal oxide	6.8KΩ	SRD¼P
D1	R920	0114143	Carbon film	330Ω	SRD¼P
D1	R921	0114149	Carbon film	560Ω	SRD¼P
D1	R922	0114151	Carbon film	680Ω	SRD¼P
⚠ C1	R924	0111798	Metal oxide	4.7KΩ	SRD¼P
C2	R925	0114049	Carbon film	22Ω	SRD¼P
⚠ D2	R928	0110277	Metal oxide	22KΩ	
⚠ D1	R931	0137611	Carbon film	2.7KΩ	RC¼GF
⚠ C1	R933	0110369	Metal oxide	10KΩ	RD3PB
⚠ D1	R934	0114171	Carbon film	2.7KΩ	SRD¼P
⚠ C1	R935	0110273	Metal oxide	15KΩ	RD2PB
C2	R936	0114049	Carbon film	22Ω	SRD¼P
⚠ D2	R937	0137559	Carbon film	220Ω	SRD¼P
E2	R938	0114223	Carbon film	82KΩ	SRD¼P
D1	R941	0114135	Carbon film	150Ω	SRD¼P

DIODES

A1	CR091	2331081	Silicon	UPC-574J
A1	CR092	0575001	Germanium	IN34A
A1	CR093	0575001	Germanium	IN34A
A1	CR094	2330632	Silicon	HZ-7 Ⓑ
A1	CR095	2330351	Silicon	IS2076
A4	CR201	0575005		IN60
B2	CR251	0575005		IN60
B3	CR252	2330351		IS2076
B3	CR253	2330351		IS2076
B1	CR254	0575001		IN34A
B2	CR255	0575001		IN34A
B1	CR256	0575005		IN60
C3	CR303	2331161		HZ11 Ⓐ/Ⓑ/Ⓒ
D6	CR306	2330351		IS2076
D6	CR307	2330351		IS2076
C6	CR308	2331161		HZ11 Ⓐ/Ⓑ/Ⓒ
C6	CR312	2330351		IS2076
C3	CR313	2330351		IS2076
D4	CR316	2331351		IS2076/IS2473H
A3	CR401	0575005		IN60
A6	CR402	2330351		IS2076
A6	CR403	2330351		IS2076
B7	CR503	2331161		HZ11 Ⓐ/Ⓑ/Ⓒ
B7	CR505	2331161		HZ11 Ⓐ/Ⓑ/Ⓒ
B7	CR507	2331161		HZ11 Ⓐ/Ⓑ/Ⓒ

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION	
B6	CR551	2330351		IS2076
B6	CR552	2330351		IS2076
B5	CR553	2330351		IS2076
B6	CR554	2330351		IS2076
B6	CR555	2330351		IS2076
B6	CR556	2330351		IS2076
⚠ D6	CR641	2330252		VO6E
D3	CR701	0575001		IN34A
D3	CR702	0575001		IN34A
⚠ D7	CR703	2330564		V11N
⚠ E8	CR705	2330551		VO9C
⚠ E7	CR006	2330551		VO9C
⚠ E7	CR707	2330551		VO9C
⚠ D2	CR709	2330551		VO9C
⚠ E6	CR710	2330351		IS2076
⚠ D6	CR711	2330351		IS2076
⚠ D2	CR712	2330251		VO6C
⚠ D2	CR713	2331173		HZ-11 Ⓒ
⚠ D6	CR714	2330191		SB-2C
⚠ E1	CR901	2331402		SA-12B
⚠ E1	CR902	2331402		SA-12B
⚠ E1	CR903	2331402		SA-12B
⚠ E1	CR904	2331402		SA-12B
⚠ D1	CR905	2330251		VO6C
⚠ C1	CR906	2330251		VO6C
⚠ C1	CR907	2330251		VO6C
⚠ C2	CR908	2331142		S-15H
⚠ D1	CR913	2330351		IS2076
D2	CR914	2330351		IS2076

COILS

A2	L003	2141454	Mold	
A2	L005	2122011	Filter coil	
A3	L206	2141454	Filter coil	
A3	L207	2141772	Filter coil	
A4	L209	2122011	Filter coil	
C4	L301	2121696	Peaking coil	220KF
C4	L302	2121694	Peaking coil	150KF
C5	L303	2121699	Peaking coil	390KF
C5	L305	2121702	Peaking coil	560KF
C7	L306	2121991	Peaking coil	2.2KF
A3	L401	2121693	Peaking coil	120KF
A4	L402	2122011	Filter coil	
A4	L404	2121698	Peaking coil	330KF
A5	L405	2141755	Sound Discriminating	
B3	L501	2141536	Band Pass coil	
C4	L502	2121706	Peaking coil	101KF
C4	L503	2121701	Peaking coil	470KF
C3	L504	2121821	Peaking coil	100KF
C3	L505	2160831	Peaking coil	
B4	L506	2121692	Peaking coil	100KF
B5	L551	2141753	Video Transformer	
B5	L552	2121822	Peaking coil	8.2jF
B6	L553	2121701	Peaking coil	470KF
C5	L554	2160445	Phase coil	
B5	L556	2121823	Peaking coil	8.2KF
D4	L701	2120483	Filter coil	
D6	L702	2120333	Filter coil	

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION
E7	L703	2120333	Filter coil
⚠ E6	L704	2120484	Filter coil
⚠ E7	L705	2120482	Filter coil
⚠ E7	L707	2120811	Filter coil
B8	L851	2121708	Peaking coil
E1	L901	2122031	Filter coil
C5	DL301	2161521	Delay line
B5	DL551	2781881	Delay line

COMPLEX COMPONENTS

B1	CP201	2141785	Trap coil
B2	CP202	2141787	Trap coil
B2	CP203	2141786	Trap coil
B1	CP204	2141767	Input filter
A4	CP206	2161503	Complex trap
C4	CP301	2161513	Complex trap
⚠ D2	CP901	2370142	Module HM9102
⚠ D2	CP902	2370142	Module HM9102
⚠ E5	M601	2370161	Module field scan module

TRANSFORMERS

B2	T001	2141082	AFS tuning
B2	T201	2141145	IFT
B3	T202	2141146	IFT
A3	T203	2141528	IFT
B2	T204	2141529	IFT
⚠ A7	T401	2250352	Sound output transformer
B3	T501	2141538	Band pass transformer
B5	T551	2141754	Video transformer
B6	T552	2141752	Video transformer
⚠ D4	T701	2161342	Line oscillator transformer
⚠ D6	T702	2260021	Line drive transformer
⚠ E8	T703	2431577	Line output transformer
⚠ E6	T704	2270185	Side pinchution transformer
⚠ D2	T901	2260021	Line drive transformer
⚠ C2	T902	2270571	Pulse transformer

TRANSISTORS

B2	TR201	2321511	2SC1855
B2	TR202	2321511	2SC1855
B3	TR203	2320141	2SC717
B2	TR251	2320591	2SC458 Ⓑ/Ⓒ
C3	TR252	2320638	2SA673 Ⓑ/Ⓒ/Ⓓ
B2	TR253	2321321	2SA844 Ⓓ/Ⓔ
B2	TR254	2320591	2SC458 Ⓑ/Ⓒ
A4	TR301	2320596	2SC458 Ⓒ/Ⓓ
C4	TR302	2320598	2SC458 Ⓑ/Ⓒ/Ⓓ
C5	TR304	2321321	2SA844 Ⓓ
C6	TR305	2320635	2SA673 Ⓒ/Ⓓ
C3	TR306	2320598	2SC458 Ⓑ/Ⓒ/Ⓓ
⚠ A6	TR401	2321433	2SD478 Ⓒ/Ⓓ
⚠ A6	TR402	2321433	2SD478 Ⓒ/Ⓓ
B5	TR551	2320591	2SC458 Ⓑ/Ⓒ
B6	TR552	2320591	2SC458 Ⓑ/Ⓒ
B6	TR553	2320591	2SC458 Ⓑ/Ⓒ
B5	TR554	2320591	2SC458 Ⓑ/Ⓒ
C5	TR555	2321321	2SA844 Ⓓ/Ⓔ
C5	TR556	2321321	2SA844 Ⓓ/Ⓔ
C5	TR557	2320591	2SC458 Ⓑ/Ⓒ
B6	TR558	2320591	2SC458 Ⓑ/Ⓒ
B7	TR559	2320591	2SC458 Ⓑ/Ⓒ
E3	TR601	2320591	2SC458 Ⓑ/Ⓒ
E4	TR602	2320631	2SA673 Ⓑ/Ⓒ
D3	TR701	2320591	2SC458 Ⓑ/Ⓒ
⚠ D4	TR702	2321321	2SA844 Ⓓ/Ⓔ
⚠ D6	TR703	2321412	2SC1722BK
⚠ D6	TR704	2321561	2SC1942
⚠ E7	TR706	2320945	2SC1214 Ⓒ/Ⓓ
⚠ B7	TR851	2321221	2SC1514VC
⚠ C7	TR852	2321221	2SC1514VC
⚠ B7	TR853	2321221	2SC1514VC
⚠ D1	TR901	0573481	2SC458 Ⓒ
⚠ D1	TR902	0573481	2SC458 Ⓒ
⚠ D1	TR903	0573480	2SC458 Ⓑ
⚠ C1	TR904	2320631	2SA673 Ⓑ/Ⓒ
⚠ D1	TR905	2321412	2SC1722 BK
⚠ C2	TR906	2321561	2SC1942
⚠ D2	TR907	0573480	2SC458 Ⓑ
⚠ D1	TR908	0573481	2SC458 Ⓒ
⚠ D1	TR909	2320631	2SA673 Ⓑ/Ⓒ

IC'S

A2	IC001	2360511	HA1126DW
⚠ A5	IC401	2360392	HA1124A
⚠ B4	IC501	2360442	HA11580A

MISCELLANEOUS

		3159471	Back cover
		3113731	Cabinet
		2490431	HP-538 Button
		3742781	Knob-Push
		3258712	Knob-Contrast, bright, colour
		3741247	Knob-Mains switch
⚠		2351131	Colour picture tube 510HWB22
⚠		2440706	Scan coil
		2771382	C-F magnet
		3739443	Presetter covering
⚠		2410455	Speaker
⚠	L905	2161496	Degaussing coil
		2590782	Tuner P.W.B Assy
		2509323	CPT BOARD Assy
		3320683	Power supply & deflection chassis Assy
		2509972	Filter BOARD Assy

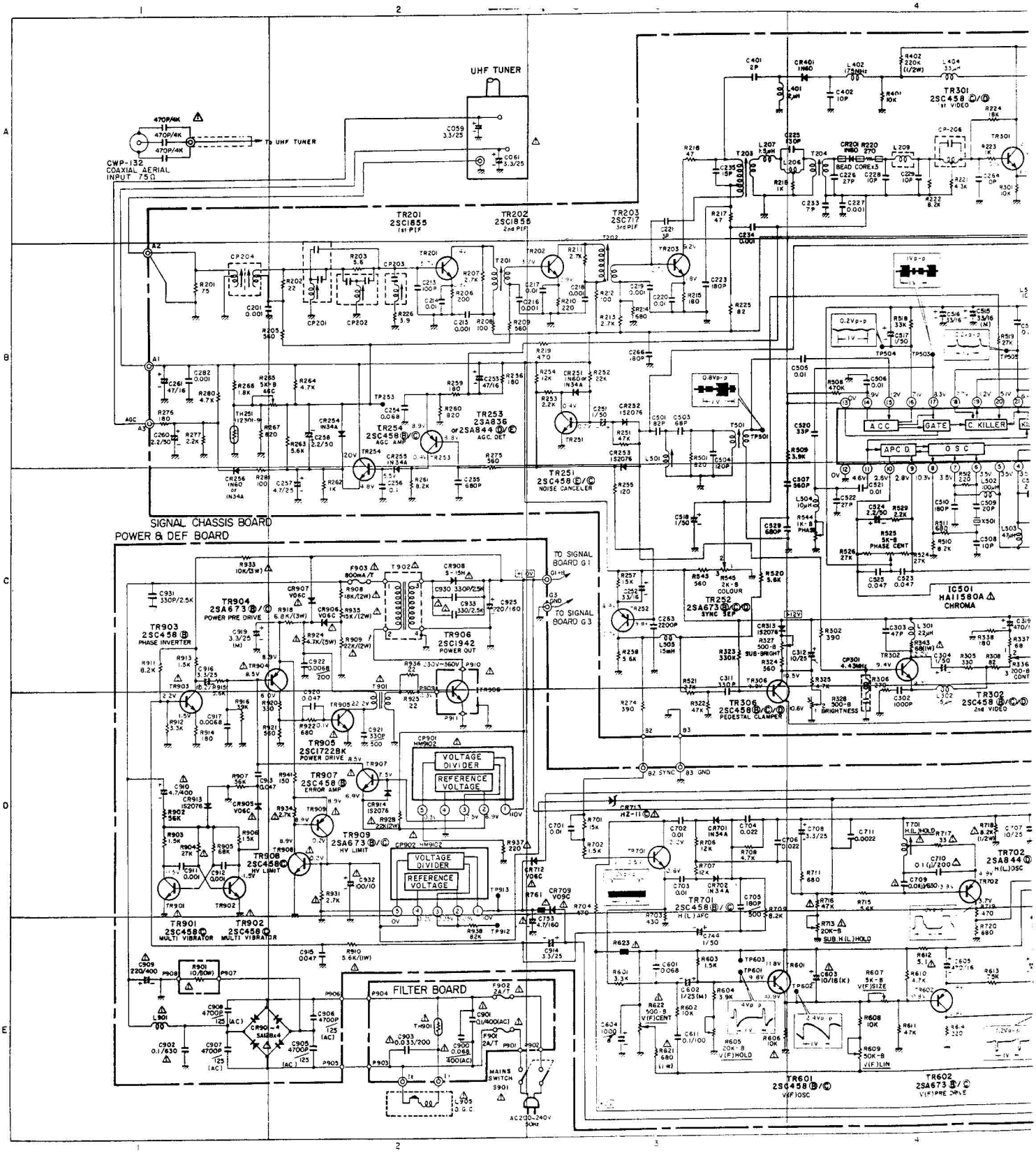
PRODUCT SAFETY NOTE – Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

PLACE	SYM-BOL NO.	STOCK NO.	DESCRIPTION
		3320696	Signal BOARD Assy
		2509301	Chroma module
		2422751	Tuner ET-536
		2685962	Socket Aerial socket
		2742115	Plug Aerial plug
⚠		2630921	Switch-Power switch
		2741744	Cord-AC cord
		2630781	Micro switch
	X501	2783073	X'tal
	CF401	2140921	Ceramic filter (6.0MHz)
		2720221	Fuse holder
⚠	F901	2720173	Fuse 2A/T
⚠	F902	2720173	Fuse 2A/T
⚠	F903	2720179	Fuse 0.8A/T
⚠	F701	2720401	Fuse 630mA/T
		4614001	Wedge
⚠	TF601	2720245	Fuse temp fuse 139°C
		9413926	Silicon gum
		2051667	Socket CPT socket
		4782841	Tape for wedge
⚠	NE851	2340181	Neon lamp
⚠	NE852	2340181	Neon lamp
⚠	NE853	2340181	Neon lamp
⚠	NE854	2340181	Neon lamp
⚠	NE855	2340181	Neon lamp
⚠	TF401	2720245	Fuse temp fuse 139°C
		2657531	Socket 10p socket
		2662291	Plug 10p plug
		2657511	Socket 24p IC socket
⚠	TH601	2340341	Thermistor 11D4H
⚠	TH901	2340401	PTC Thermistor 112301–9
	TH251	2340371	Thermistor

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100KΩ/V). Voltages taken on a complex colour bar signal including a standard colour bar signal.

- All resistors are in ohms. K=1,000 M=1,000K
- All capacitors are in μF, unless otherwise noted. P=μμF
- ▬ indicates a fuse resistor.

BASIC CIRCUIT SCHEMATIC I



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Components marked v
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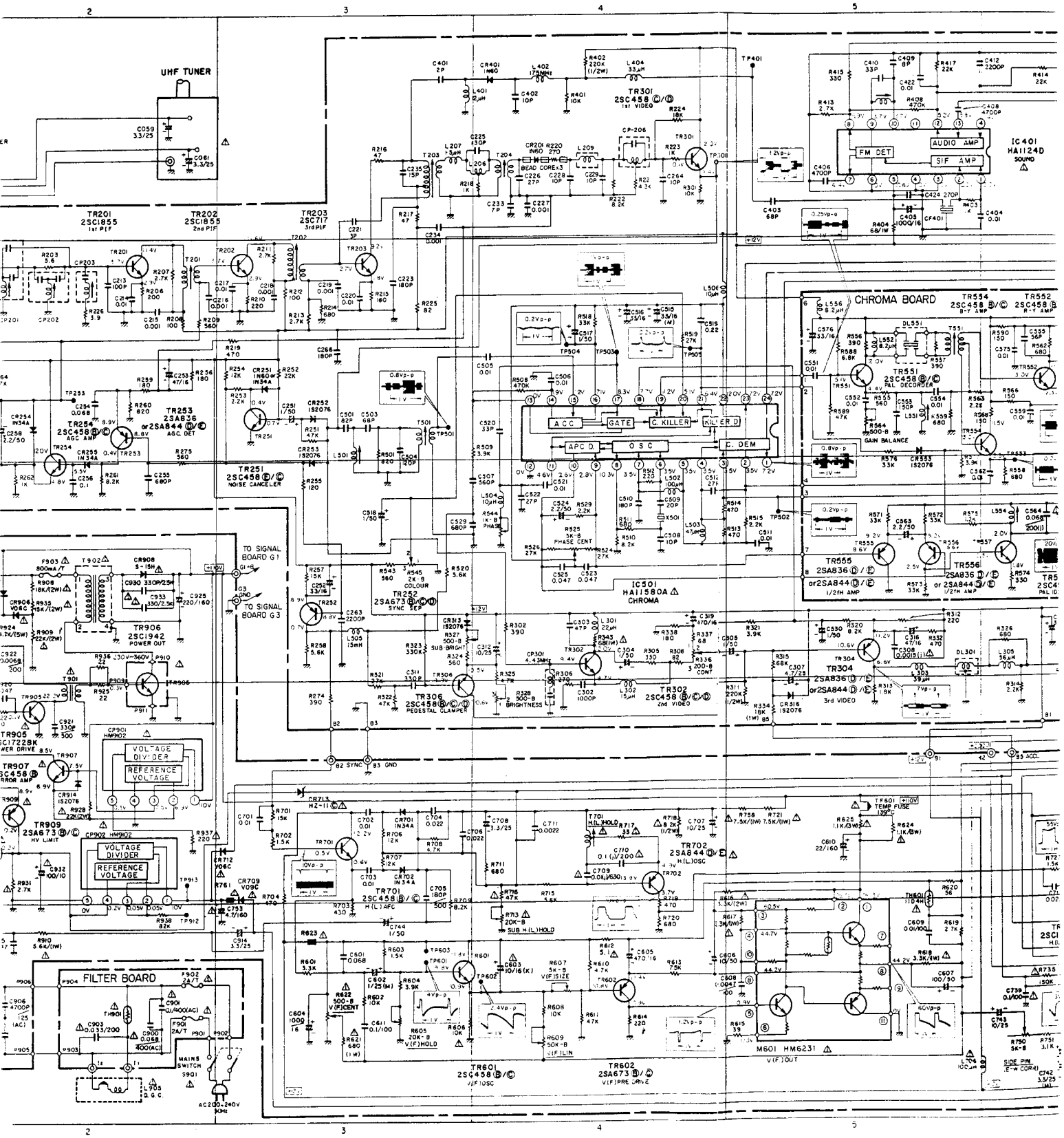
BASIC CIRCUIT SCHEMATIC DIAGRAM (CWP-132)



STOR NP6C CHASSIS

PRODUCT SAFETY NOTE

Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components read carefully the product safety notice of this service manual. Don't degrade the safety of the receiver through improper servicing.

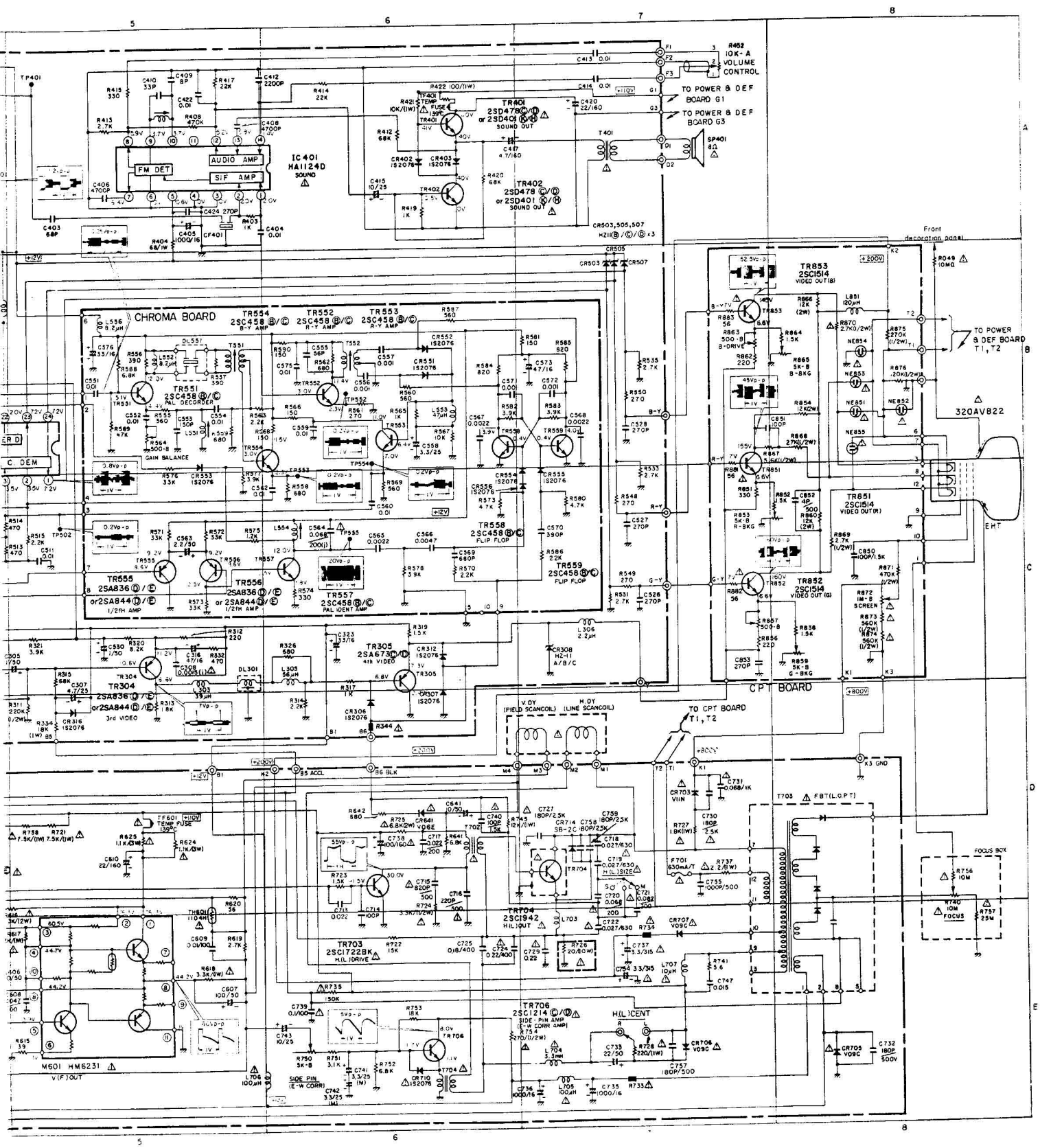
IMPORTANT

The component shaded in red is sealed at the factory.

No attempt shall be made to adjust or defeat T701.

Refer to Page 5 in Service Manual when it is necessary to adjust the sealed component during servicing.

IAGRAM (CWP-132)


CHROMA BOARD
TR554 2SC458 (B)/(C) B-Y AMP
TR552 2SC458 (B)/(C) R-Y AMP
TR553 2SC458 (B)/(C) R-Y AMP
TR551 2SC458 (B)/(C) PAL DECORDER
TR555 2SA836 (D)/(E) or 2SA844 (D)/(E) 1/2TH AMP
TR556 2SA836 (D)/(E) or 2SA844 (D)/(E) 1/2TH AMP
TR557 2SC458 (B)/(C) PAL IDENT AMP
TR558 2SC458 (B)/(C) FLIP FLOP
TR559 2SC458 (B)/(C) FLIP FLOP
TR304 2SA836 (D)/(E) or 2SA844 (D)/(E) 3rd VIDEO
TR305 2SA673 (D)/(E) 4th VIDEO
IC401 HA1124D SOUND
AUDIO AMP
FM DET
SIF AMP
TR401 2SD478 (C)/(D) or 2SD401 (K)/(M) SOUND OUT
TR402 2SD478 (C)/(D) or 2SD401 (K)/(M) SOUND OUT
TR853 2SC1514 VIDEO OUT(B)
TR851 2SC1514 VIDEO OUT(R)
TR852 2SC1514 VIDEO OUT(G)
TR703 2SC1722BK H(L) DRIVE
TR704 2SC1942 H(L) OUT
TR706 2SC1214 (C)/(D) SIDE PIN AMP (E-W CORR AMP)
M601 HM6231 V(F) OUT
CPT BOARD
TO POWER & DEF BOARD G1
TO POWER & DEF BOARD G3
TO POWER & DEF BOARD T1, T2
TO CPT BOARD T1, T2
R452 10K-A VOLUME CONTROL
SP401 8Ω
320AV822
V.DY (FIELD SCANCOIL)
H.DY (LINE SCANCOIL)
T703 FBT(L.O.P.T)
FOCUS BOX
EHT
Front decoration panel